

**The Nostalgic Process and Experience: An Examination of the Cognitive
and Experiential Nature of the Nostalgic Process at State and Trait Levels**

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Table of Contents

1	Chapter 1: Introduction and Literature Review	1
1.1	General Introduction.....	1
1.2	Literature Review	3
1.2.1	History of Nostalgia	3
1.2.2	Measurement and Research Methods of Nostalgia	6
1.2.2.1	Levels of Measurement of the Construct.....	6
1.2.2.1.1	Trait Nostalgia	6
1.2.2.1.2	State Nostalgia.....	8
1.2.2.2	Research Methods to Study Nostalgia in the Existing Literature.....	8
1.2.2.2.1	Experimental Studies.....	8
1.2.2.2.2	Observational Research	12
1.2.2.2.3	Content Analyses	13
1.2.2.2.4	Archival Research	14
1.2.3	Current Views of Nostalgia.....	14
1.2.3.1	The Structural Components.....	14
1.2.3.2	Contents/Object of Nostalgia	15
1.2.3.3	Types of Nostalgia.....	16
1.2.3.4	What Nostalgia Is Not	17
1.2.4	Causes of Nostalgia.....	18
1.2.5	Affective Tone of Nostalgia.....	22
1.2.6	Nostalgia—Good or Bad?	23

1.2.7	Benefits (Utility) of Nostalgia.....	26
1.2.8	Factors Affecting Nostalgia	28
1.3	Research Objectives	31
2	Chapter 2: Study 1—Construct Elaboration: A First Point of Enquiry	34
2.1	Introduction	34
2.2	Method.....	35
2.2.1	Sample.....	35
2.2.2	Questionnaire	36
2.2.3	Procedure.....	37
2.3	Results	38
2.3.1	What is Nostalgia?	38
2.3.2	Objects of Nostalgia	39
2.3.3	Triggers of Nostalgia.....	41
2.3.4	Motivation of Nostalgia	42
2.3.5	Frequency	43
2.3.6	Personal Past	43
2.3.7	Nostalgia and the Historical past.....	44
2.3.8	Relationships between Different Aspects of Nostalgia, and Judgements about Past Eras	49
2.4	Discussion.....	50
2.4.1	Cognitive Components.....	51
2.4.2	Affective Components.....	52

2.4.3	Motivational Components	53
2.4.4	Nostalgia and Past Era.....	55
2.4.5	Demographics.....	56
2.5	Limitations, Conclusion and Future Direction	56
3	Chapter 3: Study 2—Experimental Design for Observation of the Operational Process of State Nostalgia and the Experiential Nature of State and Trait Nostalgia	58
3.1	Research Questions.....	61
3.1.1	The Process Parameters.....	61
3.1.1.1	Response Time	62
3.1.1.2	Duration of Experience.....	63
3.1.1.3	Intensity and Variation	63
3.1.1.4	Age at Event—Search for a Nostalgia Bump.....	64
3.1.1.5	Age of Memory	64
3.1.2	Event Characteristics.....	65
3.1.2.1	Event Type.....	65
3.1.2.2	Event Contents.....	66
3.1.3	Experiential Nature	67
3.1.3.1	Phenomenology	67
3.1.3.2	Affect.....	68
3.1.3.3	Motivation	68
3.1.4	Situational and Individual Factors.....	70
3.1.4.1	Trigger for Nostalgia (Stimulus)	70

3.1.4.2	Age of the Participant	70
3.1.4.3	Gender	71
3.1.4.4	Culture	71
3.1.4.5	Place of Living	72
3.1.4.6	Trait Nostalgia (Nostalgia-Proneness)	72
3.1.4.7	Life Satisfaction.....	73
3.2	Methodology for Study 2.....	73
3.2.1	Design.....	74
3.2.2	Variables and Materials.....	76
3.2.2.1	Independent Variables	76
3.2.2.1.1	Experimental Independent Variables	76
3.2.2.1.2	Individual-Difference Independent Variables	78
3.2.2.1.3	Trait Experiential Nostalgia	80
3.2.2.2	Dependent Variables	83
3.2.2.2.1	Process Parameters Obtained from the Slider	83
3.2.2.2.2	Process Parameters Obtained from Verbal Reports	87
3.2.2.2.3	Event Characteristics	89
3.2.2.2.4	State Experiential Nostalgia	92
3.2.3	Procedure.....	95
3.2.3.1	Instructions and Procedure for the State Nostalgic Experience in the Indirect Condition	95

3.2.3.2	Instructions and Procedure for the State Nostalgic Experience in the Direct Condition.....	97
3.2.3.3	Instructions and Procedure for Observing the Event Characteristics and the Experiential Nature of State Nostalgia.....	98
3.2.3.4	Instructions and Procedure for Observing the Experiential Trait Nostalgic Process and the Individual Factors.....	99
3.2.4	Sample.....	99
4	Chapter 4: Study 2—Experimental Analyses of State Nostalgia Triggered by Direct and Indirect Stimuli	100
4.1	Sample for State Level Analyses.....	100
4.2	The Process Parameters	105
4.2.1	Response Time (RT) and Duration	105
4.2.2	Intensity.....	106
4.2.3	Variation.....	108
4.2.4	Age at Event.....	108
4.2.5	Age of Memory	109
4.2.6	Association between Different Process Parameters	109
4.3	The Event Characteristics	111
4.3.1	Event Specifications.....	112
4.3.1.1	Type and Number of Events Recalled.....	112
4.3.1.2	Frequency of Event.....	115
4.3.2	Content of Event Recalled.....	116
4.3.2.1	Location of Event—Place (City/Town) and Locality	116

4.3.2.2	Characters—Count and Clarity	117
4.3.2.3	Activity	119
4.3.2.4	Setting	120
4.3.2.5	Event Affective Tone	121
4.4	The State Experiential Nature of Nostalgia	122
4.4.1	Phenomenology	122
4.4.1.1	Item Descriptions of the Rubin Scale Measures	122
4.4.1.2	Comparison of Phenomenology of Nostalgic Experience with General Autobiographical Event Recollection	125
4.4.1.3	Item Correlations and Multiple Regression Analyses Predicting Belief and Recollection	127
4.4.1.4	Other Phenomenological Measures	130
4.4.1.4.1	Character Identification	131
4.4.1.4.2	Imagery of Event	131
4.4.1.4.3	Other Sensory Experiences Recalled	132
4.4.2	Affective Tone of the State Nostalgic Experience	132
4.4.3	Motivational Intent Expressed in the State Nostalgic Experience	133
4.4.4	Associations between the Experiential Nature and Other State Nostalgia Components	134
4.5	Analyses of the Direct Stimulus Condition State Nostalgic Process for the Two Target Periods—Childhood and Teenage Years (Between-Block Analyses)	135
4.6	Summary of State Level Analyses	136

5	Chapter 5: Study 2—Experimental Analyses of State Nostalgia in Terms of Individual Factors and the Trait Experiential Nature of Nostalgia	137
5.1	Sample for Trait Level Analyses	138
5.2	Individual Factors	138
5.2.1	Age and Gender.....	138
5.2.2	Place of Living	141
5.2.3	Nostalgia-Proneness	142
5.2.4	Life Satisfaction	144
5.2.5	Culture.....	144
5.3	Trait Experiential Nostalgia.....	148
5.3.1	Motivational Nature of Trait Nostalgia.....	149
5.3.2	Affective Nature of Trait Nostalgia	155
5.3.2.1	Affective Tone.....	155
5.3.2.2	Emotions in Trait Nostalgic Experiences	157
5.4	Associations between the Experiential Nature of Trait Nostalgia and the Individual-Difference Factors; and Associations between Trait and State Nostalgia	159
5.4.1	Individual-Difference Factors	160
5.4.2	Process Parameters.....	161
5.4.3	Event Characteristics.....	162
5.4.4	State Experiential Nature	165
5.4.4.1	Affective Tone of the State Nostalgic Experience	165
5.4.4.2	Motivational Intention in State Nostalgic Experience.....	167

5.4.4.3	Phenomenological Nature of State Nostalgic Experience.....	168
5.4.5	Summary of Trait Nostalgia Affect and Motivation Associations.....	170
6	Chapter 6: Discussion	174
6.1	General Discussion of Study Findings in the Context of Overall Research Objectives	174
6.1.1	The Cognitive Aspects of Nostalgia	174
6.1.1.1	Memory Contents	174
6.1.1.2	Parameters of the Cognitive Process	179
6.1.1.3	Phenomenology	183
6.1.2	The Affective Nature of Nostalgia	185
6.1.2.1	Affective Tone of Event	186
6.1.2.2	Affective Tone of Experience	186
6.1.3	The Motivational Nature of Nostalgia	189
6.1.4	The Influence of Situational and Individual Factors	191
6.1.4.1	Situational Factors	191
6.1.4.2	Individual-Difference Factors	192
6.2	Implications, Limitations and Future Directions	196
6.3	Conclusion	199
7	References.....	201

List of Tables

Table 2.1.	Frequency Distribution of Responses to Objects of Nostalgia.....	40
Table 2.2.	Frequency Distribution of Responses to Triggers of Nostalgia.....	41
Table 2.3.	List of Responses to Historical Past Eras that Are Appreciated and the Reasons for Appreciation of the Past Eras.....	44
Table 2.4.	Movies and Books about the Past that Are Appreciated and the Reasons for Appreciation of These Media.....	47
Table 3.1.	Southampton Nostalgia Scale.....	79
Table 3.2.	Items on Trait Affective Experiential Nature.....	81
Table 3.3.	Items on Motivational Experience.....	82
Table 3.4.	Example of a Raw Data File Obtained from the Slider for Process Function of the Nostalgic Experience.....	86
Table 3.5.	An Excerpt of the Transformed Data File for the Slider Process Function Data.....	86
Table 3.6.	Event Information Form.....	91
Table 3.7.	Rubin's Phenomenology Scale.....	94
Table 4.1.	Descriptive Statistics for the Sample Age Distribution in the Two Experimental Conditions.....	103
Table 4.2.	Descriptive Statistics for the Sample Gender Distribution in the Two Experimental Conditions.....	104
Table 4.3.	Descriptive Statistics for Response Time (RT) and Duration (in seconds) in the Two Experimental Conditions.....	105
Table 4.4.	Descriptive Statistics for Intensity and Variation in the Two Experimental Conditions.....	107
Table 4.5.	Examples of Different Event Types.....	114
Table 4.6.	Examples of Different Event Locations.....	116
Table 4.7.	Examples of Different Event Activities.....	120
Table 4.8.	Item Descriptions (Mean and SD) For the Two Experimental Conditions.....	123
Table 4.9.	Rubin Scale Item Comparisons (Mean and SD) for Nostalgic Memory (Data from the Current Study) and General Autobiographical Memory (Data from Rubin et al., 2003).....	125
Table 4.10.	Correlation Coefficients for the Phenomenology Items.....	127

Table 4.11.	Multiple Regression Beta Coefficients for the Indirect and Direct Conditions.....	128
Table 4.12.	Examples of Different Sensory Experiences Recalled.....	132
Table 5.1.	Descriptive Statistics for Process Parameters for the Two Experimental Samples.....	146
Table 5.2.	Descriptive Statistics and Mean Comparison Values of Phenomenological Measures for the two Experimental Samples—NZ and Indian.....	148
Table 5.3.	Descriptive Statistics for the Items on the Phenomenology of Nostalgic Motivation (N = 487).....	150
Table 5.4.	Mean Comparison Values of Items on the Motivational Nature of Nostalgia.....	152
Table 5.5.	Mean Comparison Values of the Items on Motivational Nature of Nostalgia.....	154
Table 5.6.	Descriptive Statistics for the Items on the Phenomenology of the Affective Nature of Nostalgia.....	155
Table 5.7.	Mean Comparison Values of Items on the Motivational Nature of Nostalgia.....	156
Table 5.8.	Descriptive statistics for the items on emotions in nostalgia.....	157
Table 5.9.	Mean Comparisons for Event Location and Trait Nostalgic Motivational and Affective Nature.....	163
Table 5.10.	Mean Comparisons for Event Activity and Trait Nostalgic Motivational and Affective Nature.....	164
Table 5.11.	Mean Comparisons for State Event Affect and Trait Nostalgic Motivational and Affective Nature.....	165
Table 5.12.	Mean Comparisons for State Nostalgic Experience and Trait Nostalgic Motivational and Affective Nature	166
Table 5.13.	Mean Comparisons for State Nostalgic Motivation and Trait Nostalgic Motivational and Affective Nature.....	168
Table 5.14.	Correlation between the State Nostalgia Phenomenology Items (including both experimental conditions, N = 487) and Trait Nostalgic Motivational and Affective Nature.....	169

List of Figures

Figure 3.1.	The Operational Process of Nostalgia.....	60
Figure 3.2.	The Timeline for the Experimental Procedure and the Construct and Variables Measured in Each Step of the Procedure.....	76
Figure 3.3.	Life Satisfaction Scale.	80
Figure 3.4.	The Slider.....	84
Figure 3.5.	Event Graph	88
Figure 3.6.	Event Specification Sheet.....	90

ABSTRACT

This main objective of this research work was to study the experiential nature of nostalgia. Nostalgia is a complex phenomenon with a *cognitive* component focussed on past autobiographical memories that elicits a rich *phenomenological experience*, which has a strong *affective* signature characterised by a powerful *motivational* aspect of longing for that past time. This thesis investigated this complex phenomenon in terms of its cognitive components and the phenomenological, affective and motivational nature of the experience, while accounting for individual differences. To this end, two studies were conducted.

Study 1 (N = 52) was an exploratory survey that investigated the motivational intention and affective tone expressed in nostalgic experiences. It also investigated cultural differences, and the prevalence of personal and historical nostalgia. The results showed that historical nostalgia—nostalgia for particular historical periods—was not universal, while personal nostalgia differed in its contents and experiences. Nostalgia was mostly a positive experience and the motivation mostly did not involve a wish to return to the past.

Study 2 (N = 487) was an experiment that observed the nostalgic process when elicited through two different types of triggers—instructions and music. The influence of individual differences in age, gender, culture, life satisfaction and trait nostalgia (i.e., people's tendency to feel more or less nostalgia) and the emotions and motivations for their general nostalgic experiences on the state nostalgic process were also examined. The nostalgic experiences were generally positive and were characterised by a wish to momentarily relive the past and experience similar future times. The experiences further varied with the trigger that elicited nostalgia and from one individual to another. Thus, nostalgia is not a constant phenomenon and its complex nature can be explicated by examining its components during empirical observations of the phenomenon as a whole.

1 Chapter 1: Introduction and Literature Review

1.1 General Introduction

Nostalgia is considered to be a commonplace and universally experienced feeling. In one's lifetime, one is likely to experience nostalgia sometimes. Nostalgia involves reliving a memory from one's past with such intensity and vividness that it almost feels like one is living through the events that formed that memory, at the present time. Such an experience is different from the simple recall of an autobiographical memory, as it is characterised by a greater degree of emotions and feelings than that evoked in most recall of memories and is accompanied by a feeling of longing for the recalled memory.

The autobiographical memory constitutes memory about oneself, derived from memory about personal experiences that have occurred in one's life and one's general knowledge about the world. Information entering the autobiographical memory might be encoded along with the emotion accompanying it. It is also possible for an emotion to accompany the reconstruction of a memory even when it had not accompanied the encoding process. One such instance is that of the affective feeling of nostalgia.

Davis (1979) described nostalgia as a 'yearning for yesterday', a feeling of longing for the past. Nostalgia is thought to be a ubiquitous (Boym, 2001), self-relevant emotion (Wildschut et al., 2006) that has many postulated benefits in terms of understanding life (Routledge et al., 2008, 2011) and coping with its more strenuous phases (Juhl et al., 2010; Zhou et al., 2008). Given its prevalent nature and many advantages, nostalgia appears to be a significant emotion-provoking state that plays a meaningful role in our lives. Thus, an understanding of its functional structures and processes of generation is of considerable interest.

In the psychological literature, nostalgia is considered to be a complex affective state with a memory component that results from reflection on experiences, objects, persons or ideas

associated with the past (Holak & Havlena, 1998). Studies on this complex affective state looked into different aspects of it. Some aspects of the *components* (Dickinson & Erben, 2006; Johnson-Laird & Oatley, 1989; Kemper, 1987), *objects* (Kleiner, 1970; McGriff, 1997), *cause* (Dickinson & Erben, 2006; Harper, 1996; Kleiner, 1970), *tone* (Barrett et al., 2010; Werman, 1977), *factors* (Batcho et al., 2008; Holbrook, 1993) and *benefits* (Sedikides et al., 2008; Wildschut et al., 2006, 2010) of nostalgia received attention from different researchers. However, *what it means to be nostalgic* is not well-defined in the literature owing to the changing semantics of this concept.

As is often the case with words and concepts, their meanings and connotations change over time, sometimes so much so that the historical meaning of the word could have a connotation that is diametrically opposite to its present meaning. The history of nostalgia is important and is worth a look, as much of the existing academic literature on the topic is filled with questions and unresolved issues pertaining to the meaning, nature, causes, effects and functions of the concept of nostalgia that arise from its changing meaning in the course of history.

The following sections in this chapter provide a brief outline of nostalgia's history to put into context some of the questions and confusions about what makes up nostalgia. Following this, the existing academic literature on nostalgia is reviewed. First, the measurement tools and research methods of nostalgia are delineated to provide a brief view of the different approaches through which this concept has been investigated. Then, current definitions of nostalgia are stated. Next, the empirical findings and non-empirical literature on the different aspects of nostalgia are discussed. Nostalgia is a topic of interdisciplinary interest but the focus of this thesis work has been from a psychological perspective; therefore, the literature review mainly focuses on the psychological studies of nostalgia. Following the review of the literature, some gaps in knowledge are identified and the objectives of this work are outlined in the context of the literature.

1.2 Literature Review

1.2.1 History of Nostalgia

The origin of the word ‘nostalgia’ traces back to 1688, when a Swiss physician named Johannes Hofer coined the term ‘nostalgia’ from the Greek words ‘nostos’ and ‘algos’, which mean ‘to return’ and ‘pain’, respectively (Austin, 2007, 2010; Boardman, 2002; Davis, 1979; Dodman, 2018; Hepper et al., 2012; Hofer, 1688; Köneke, 2011). Hofer observed that Swiss mercenaries that were away from home were plagued by certain anxieties and bouts of weeping, physical and physiological symptoms like irregular heartbeat, insomnia, anorexia, weakness, diminished senses, and they constantly thought about home (McCann, 1941). He deduced that these symptoms were brought about by brain dysfunctions caused by hyperactivity (described as “continuous vibration of animal spirits...”, p. 384, as cited in Sedikides et al., 2004) in the memory regions of the brain where ideas about one’s homeland are stored (described as “traces of idea of the Fatherland”, p. 384) and were a result of a persistent wish to return back home. Thus, he described this ‘neurological disease’ as pain or suffering caused by a wish to return home, hence, nostalgia (as per the Greek translation).

Successive physicians in the eighteenth century also described nostalgia as a physical disease but ascribed different causes to it. Scheuchzer (1705, 1731) also observed a high incidence rate of nostalgia in Swiss mercenaries, who originated from the Alps and were fighting on the plains of Europe. He suggested that nostalgia was a result of environmental conditions like high air pressure, which caused an increased blood-flow to the brain (as cited in Davis, 1979, p. 2). Another explanation for the causes of nostalgia was provided by military physicians who were trying to determine why nostalgia was a Swiss illness and thought it to have been brought about as a result of eardrum and brain damage caused by the clanging of the cowbells in the Alps (Davis, 1979). Nostalgia persisted as a neurological disease in the annals of medical literature throughout the eighteenth and nineteenth centuries (Sedikides et al., 2004), and “spread” beyond Switzerland to other studied populations, like

the French and the Americans (Rosen, 1975). It then became a psychosomatic disorder caused by internal conflicts (Blumenbach, 1783). In the twentieth century, it moved into the realm of psychiatry, was characterised by depression and melancholia (McCann, 1941, Rosen, 1975) and listed symptoms like anxiety, sadness, insomnia and appetite loss (Holak & Havlena, 1991; Batcho, 1998). The psychodynamic theorists considered it to be a disorder of immigrants (Frost, 1938, p. 801), while the later psychoanalysts thought it to have been caused by a wish to return to the mother's womb or by an unresolved childhood trauma (Daniels, 1985; Fodor, 1950; Kaplan, 1987; Kleiner, 1970, Kulish, 1989; Jackson, 1986; Neuman, 1971; Peters, 1985; Sterba, 1940).

From its origin until the mid-twentieth century, nostalgia was unanimously thought of as being pathological—a disease or a disorder (Köneke, 2011). However, from the 1970s onwards it soon entered the realm of normality (Austin, 2007; Davis, 1979) when it shed the quality of wishing to return to one's homeland. This wish diverged from its parent to become an independent concept in its own right, christened as 'homesickness' (Davis, 1979; Hepper et al., 2012; Kleiner, 1979; van Tilburg et al., 1996; Werman, 1977). Nostalgia, now in need of an object, became focused on *time* (the past) instead of *space* (the homeland) and became a yearning for the past rather than a yearning for a place.

When nostalgia was characterised by a yearning for a place it was constrained to be experienced by only those who moved away from a place (i.e., one's homeland) and therefore, had the opportunity (and the need) to feel pain from wanting to return to that homeland. Consequently, nostalgia was reserved for a few special populations like immigrants, soldiers, seafarers and first-year students who moved away from home (Cox, 1988; Jackson, 1986). Once nostalgia could move on to be a yearning for the past, it became accessible to all and, as a result, became universal—a phenomenon that could be experienced by all. It even moved from the individual to the collective, i.e., a phenomenon that could be experienced by a group as a whole, in addition to being available to an individual (Davis,

1979). In the academic literature, this turning point in the meaning of the concept of nostalgia, and its new distinction from ‘homesickness’, had a multitude of repercussions.

As long as it belonged to the few, nostalgia could exist as a maladaptive and a negative phenomenon. However, once it was an experience available to all, it then became necessary to explain why people would yearn for the past and to question whether it was at all maladaptive or a negative phenomenon. Consequently, nostalgia became a positive phenomenon and the description of the nostalgic experience leaned more towards being characterised as bittersweet, warm, pleasurable rather than an experience involving sadness, anxiety, insomnia, etc. (Austin, 2007; Davis, 1979; Nikelly, 2004).

It then became necessary to discuss the functions of nostalgia instead of figuring out the source or cause of the malfunction. As a result, possible benefits and functions of nostalgia filled the psychological literature. Subsequent research on the topic has led to the establishment of nostalgia as a beneficial experience that can act as a coping method during periods of transition (Davis, 1979) and help deal with the concept of one’s own mortality. It has also been found to have existential functions that can help make sense of the meaning of life (Routledge et al., 2008).

Before moving on to discussing the current state of affairs of nostalgia, it should be pointed out that the above discussion on the history of nostalgia, begins with the seventeenth century when the history of the term began. However, it can be expected that nostalgia as it is thought of today (i.e., missing the past) might have existed in the human and societal psyche long before Hofer and the birth of the term itself, but due to a lack of definition of the concept, it failed to be indexed as nostalgia in written discussions. Some evidence for this is obtained from Homer’s *Odyssey* (c.f., Wildschut et al., 2014), although it was his homeland that Odysseus wanted to return to and not the past.

The next section provides the base for the research methodologies through which nostalgia is studied and understood today. This is to provide a context through which to interpret the academic literature on nostalgia discussed in this chapter.

1.2.2 Measurement and Research Methods of Nostalgia

Discussed below are the different methods that have been used in the literature to study the concept of nostalgia, in its current meaning, i.e., medical and clinical methods used to study the now archaic semantics of nostalgia are not included in the discussion below. However, methods used to study the historical path of the concept are briefly mentioned.

1.2.2.1 Levels of Measurement of the Construct

The construct of nostalgia, akin to many others in psychological studies (e.g., anxiety), can be measured as both a state or a trait variable. As a trait variable, nostalgia is measured through either standardised, established scales or Likert scale items designed to suit the exact needs of a research study. As a state variable, nostalgia is measured through experimental induction of a nostalgic experience or, as above, Likert scale items relevant to the research question at hand. Some of these tools and methods for studying nostalgia at these two measurement levels are discussed below.

1.2.2.1.1 Trait Nostalgia

Trait nostalgia refers to how likely or prone one is to having nostalgic experiences and how much one values these nostalgic experiences. It is also referred to as nostalgia-proneness. A few different standardised tools exist to measure trait nostalgia, e.g., Batcho Nostalgia Inventory (BNI; Batcho, 1995), Southampton Nostalgia Scale (SNS; Routledge et al., 2008), Index of Nostalgia Proneness (INP; Havlena & Holak, 2006), Holbrook Nostalgia Index (HNI; Holbrook, 1993), etc. In psychological studies, the BNI and the SNS are the most commonly used tools for measuring trait nostalgia.

The Batcho Nostalgia Inventory (BNI), developed by Batcho (1995), contains questions on personal nostalgia, pertaining to twenty items from when one was younger—e.g., TV shows, toys, school, church, ‘the way society was’, etc.—and respondents are asked to indicate how much they miss each item. However, this scale is restrictive in its breadth of facets of nostalgia that is explored, as it specifically pertains to a few items (including objects and ideas), some of which might have been more common in a time-period that one is not particularly nostalgic about (e.g., schooldays), or the item itself might not have been the object of one’s nostalgia and might not be something that someone misses as such (e.g., church).

The Southampton Nostalgia Scale (SNS) (Routledge et al., 2008) is a measure of trait nostalgia or nostalgia-proneness. It contains seven items pertaining to the frequency and importance of nostalgia to the respondent. For example, one item asks “How prone are you to feeling nostalgic?”, which the respondents answer on a seven-point Likert scale. Routledge, et al. (2008) found a moderate correlation between the BNI and the SNS.

The Index of Nostalgia Proneness (INP) (Havlena and Holak, 2000) is a measure of individual nostalgia-proneness with a focus on personal or feeling-based items. The INP contains 31 Likert-type questions derived from four classes of nostalgia—*personal*, *interpersonal*, *cultural* and *virtual* nostalgia (explained in the section below).

The Holbrook Nostalgia Index (Holbrook, 1993) is a twenty-item index scale on consumer behaviour and preferences for different symbolic and utilitarian products (Holbrook & Schindler, 1994; Schindler & Holbrook, 2003). This scale and a few others that measure trait nostalgia (e.g., the Evoked Nostalgia Scale (NOST; Pascal et al., 2002) are specialised scales used mainly in marketing and consumer behaviour research, and as such are not as relevant in psychological studies.

Some research studies have not incorporated the complete standardised trait-nostalgia scales and have instead used one or two items from the scale that were deemed important

(e.g., Wildschut et al., 2010, Study 2), while other studies have created original items to answer particular research questions.

1.2.2.1.2 State Nostalgia

State nostalgia refers to individual nostalgic experiences that is usually studied by *empirically inducing* nostalgia (i) through instructions to feel nostalgic, or (ii) through a direct, environmental stimulus of different sensory modalities (e.g., olfactory (smells), auditory (musical excerpts) and visual (pictures, art, written text, etc.)) or (iii) by inducing some other cognitive or affective state that creates a need for nostalgia within the individual (e.g., making them feel lonely, reminding them of their mortality, etc.).

Similar to trait nostalgia, state nostalgia is usually *measured* experimentally *through self-report measures* of the intensity of the nostalgic experiences that occurred over the course of the experiment. For example, Wildschut et al. (2006) used the items “Right now, I am feeling quite nostalgic”; “Right now, I am having nostalgic feelings”; and “I feel nostalgic at the moment.” to get an assessment of state nostalgia.

1.2.2.2 Research Methods to Study Nostalgia in the Existing Literature

1.2.2.2.1 Experimental Studies

Studies in nostalgia research have looked at both state and trait level nostalgia, but most studies on state nostalgia and all studies on trait nostalgia analyses have featured quasi-experimental and correlational research designs. Only a handful of state nostalgia studies have used true experimental research designs.

State Nostalgia Experiments

The different methods of state nostalgia induction in experimental research on nostalgia are elaborated on in the following paragraphs.

Autobiographical Narratives

A common method of studying autobiographical memory is through autobiographical description of the memory, where participants are asked to, first, bring to mind or visualise the event and then give a detailed written description of the event. Instructions are given to provide specific details about the people, objects, and setting of the event and to describe the feelings that are elicited from thinking about the event. This method can be criticised for its subjectivity, as memory reconstruction is more often than not quite inaccurate but it can be a useful tool for gaining insight into the subjective individual experience and study emotional states (Wildschut et al., 2006).

Consequently, autobiographical narratives are widely used in nostalgia research to induce state nostalgia. Some experimental studies have used this method to induce state nostalgia and have then looked at the effect of the experience on the individual, to infer the functions of nostalgia. For example, Wildschut et al. (2006, Studies 3–7) studied the causes and functions of nostalgia through several experiments, where participants were randomly assigned to different conditions and nostalgia was induced through instructions to think about a nostalgia-evoking event, followed by a written description of the event and a manipulation check through self-report measures.

In some studies, as the experience itself was not of importance but rather the focus was on the benefit of having that experience, participants were asked to visualise the event in detail and then to briefly describe it through a few keywords instead of a detailed description (e.g., Wildschut et al., 2010, Study 4 and 5; Zhou et al, 2008, Study 3). In other studies, participants were asked to provide a detailed description of the event they thought about but the description itself was not usually of interest and, therefore, not always analysed, instead the effect of the nostalgic experience on some other variable of interest was measured, using within-subject (e.g., Verplanken, 2012) or between-subject designs (e.g., Zhou et al, 2008).

Experimental Manipulation through an External Physical Stimulus

Studies have also induced state nostalgia through physical stimuli like music, smells, art and advertisement. Manipulation of the environment is an effective method for inducing a desired cognitive or affective state. However, this is extremely difficult to carry out in this context, as to implement a stimulus that is autobiographically-relevant to a participant, a researcher needs access to a good deal of personal data from a participant's past. Some autobiographical memory studies have used the 'diary method' (Burt, 1992; Burt et al., 1998) and the 'photo album method' (Burt & Kemp, 1994) for autobiographically-relevant stimuli but more often studies instead have used stimuli that are episodically relevant at the societal/cultural level, and therefore, likely to also be autobiographically relevant to the participant. In nostalgia research, the stimuli usually include popular music, common smells, pop-culture media (advertisements, product brands, etc.), or literature and art.

For example, Barrett et al. (2010) used 15-second long song samples of popular music to see if they induced nostalgia. They also examined the influence of state (mood) and trait factors (nostalgia-proneness and personality dimensions) on the nostalgic experience elicited by the songs. Similarly, Zhou et al. (2012, Study 3) experimentally-induced state nostalgia through music, and looked at the subsequent relationship between levels of nostalgia and feelings of physical warmth. Zhou et al. (2012, Studies 1 and 2) used natural and experimental manipulation of temperature to study its influence on state nostalgia. Reid et al. (2015) used 12 distinct smells, presented as scented oils in test-tubes, as stimuli to evoke nostalgia. Participants sampled the scents and rated them on their degree of familiarity, arousal, autobiographical relevance, and nostalgia-evoking potential.

Experimental Manipulation of Internal State

Yet another method of inducing state nostalgia is through manipulation of the internal mental state of an individual so as to create a need for a nostalgic experience. This method rests on the principle of mood incongruency. There is evidence for both mood congruency

and incongruency in the cognitive psychology literature. Mood congruency is a phenomenon where a negative affective state activates negative self-relevant cognitions, which can then lead to the recall of negative autobiographical memories (c.f., Sedikides, 1992). In mood incongruency, on the other hand, a negative affective state leads to the retrieval of positive autobiographical memories (Wildschut et al., 2006). In nostalgia research, this phenomenon has been used to induce state nostalgia by creating a need for nostalgia within the individual, and through these methods, various functions of nostalgia have been hypothesized and experimentally tested.

Wildschut et al. (2006, Study 3) studied the effect of mood on nostalgia by randomly assigning participants to positive, negative or neutral mood conditions and consequently measuring state nostalgic levels. They concluded that nostalgia might play a counteractive role against negative affect, as participants in the negative mood condition showed significantly greater nostalgic levels than those in the neutral condition but no such difference was observed between the positive and neutral mood conditions. Through similar methodologies, they also showed that nostalgia counteracts loneliness (Wildschut et al., 2006, Study 4), enhances social bonds and self-regard and results in positive affect (Wildschut et al., 2006, Studies 5–7).

Some other studies have used natural manipulation (instead of artificial experimental manipulation) of internal states that lead to nostalgia, i.e., these studies have selected participants who were in a situation that was a fertile ground for increased state nostalgic experiences, e.g., first-year university students, migrants, etc. For example, Iyer and Jetten (2011) conducted a longitudinal study over a period of seven months in first-year students undergoing a life transition, to study the discontinuity hypothesis of nostalgia. State nostalgia was measured using a one-item, self-report measure.

Trait Nostalgia Experiments

Some studies have looked at the functions, effects and factors of nostalgia at the trait level, by either presenting them with a relevant physical stimulus or experimentally manipulating the internal mental states of participants, and assessing the effect and interaction effect, respectively, of trait nostalgia levels of the individual on the dependent variables in the study. Trait nostalgia levels were usually measured through the standardised tools outlined above. Consequently, most of these studies used a quasi-experimental design that also involved correlational research. Examples of these studies are discussed below.

Routledge et al. (2008, Studies 1 and 2) showed nostalgia-proneness (trait nostalgia) helps cope with the concept of one's mortality through experimental manipulation of participants' inner mental states. They found that, when people were reminded of their mortality (i.e., mortality was made salient in their mental space), those who were high in nostalgia-proneness showed a higher level of perception of life as meaningful (Study 1) and a lower level of mental accessibility to death thoughts (Study 2).

In other studies, the relation between trait nostalgia (both personal and historical) and preference for art (Specht & Kreiger, 2016) and emotional tone and content of original song lyrics (Batcho, 2007) was studied, through experimental manipulation of art and lyrics and measurement of nostalgia using standardised questionnaires like the Batcho Nostalgia Inventory (1995) and the Holbrook Nostalgia Index (1993).

1.2.2.2.2 Observational Research

Quite a few research studies have used observational research methods to explore the structure and function of nostalgia. This was especially true in the earlier days of non-pathological nostalgia but it is still widely used in nostalgia research as the concept is still in its defining period and much is yet to be explored.

For example, Davis (1979) explored the nature and function of nostalgia through in-depth interviews of a small group of participants. Hirsch (1992) studied smells that evoke

nostalgia, by interviewing 989 participants in an American mall who were asked to list the odours that causes them to become nostalgic. Batcho (1995) studied different aspects of nostalgia and relative judgements about the past, present and future world, using the survey method. The results of this study led to the establishment of the Batcho Nostalgia Inventory.

In recent years, Wildschut et al. (2010, Study 1) asked participants to describe situations that made them nostalgic and coded their answers for the presence of instances that listed loneliness as a trigger. The study provided preliminary evidence for nostalgia as a moderation factor in avoiding the effects of loneliness, which was tested further using experimental methods.

1.2.2.2.3 Content Analyses

Yet another popular method used to study what comprises nostalgia has been content analyses. This method is frequently used in marketing and consumer behaviour research. Psychological research that uses this method usually involves an analysis of autobiographical narratives obtained from participants, either through a survey or from data collected as a part of an experimental study.

Stern (1992) carried out a literary critique of nostalgia using advertisement texts. A taxonomic classification of nostalgia (historical and personal nostalgia) was presented as the determinant of literary plot, setting, characters and values in advertising, through an analysis of advertisements, periodicals and catalogues. Baker and Kennedy (1994) similarly distinguished between real, simulated, and collective nostalgia by showing participants a magazine advertisement that was thought to be a relevant stimulus for a nostalgic response, and measuring their attitudes toward the advertisement and the nostalgia evoked by it.

Havlena and Holak (1996a) examined the meaning of nostalgia using visual images as stimuli by asking participants to create a collage to represent nostalgia, using images and words from ten consumer magazines provided by the researchers. Participants were instructed to present the most important materials at the centre and the less important ones towards the

edge of the collage, and were later asked to explain the reasons for their material selection and arrangement of their collage. In other studies, Holak and Havlena (1992, 1998) identified common themes, subjects and emotions in the nostalgic experience and Wildschut et al. (2006, Studies 1 and 2) studied the content, triggers and functions of nostalgia by analysing written descriptions of autobiographical narratives.

1.2.2.2.4 Archival Research

A plethora of other academic studies on nostalgia involve non-experimental studying of the existing content of nostalgia represented in different aspects of media (movies, music, advertisements, consumer magazines, etc.), literature (historical, academic, fictional and non-fictional), and art. At times, these studies have included reflections of the authors themselves on their understanding of nostalgia, drawn from their own personal experiences (e.g., Boym, 2001; Coontz, 1993; Starobinski, 1966; Stewart, 1988; Turner, 1987; Werman, 1977). The literature on the history of nostalgia and a major portion of the academic literature on the topic can be argued to have also been obtained through content analyses of media.

The above sections have identified the different methods used in the academic study of nostalgia. In the following section, nostalgia as it stands today is elaborated on in terms of what it is thought to be, what it is thought not to be and what constitutes it.

1.2.3 Current Views of Nostalgia

In the current academic literature, nostalgia is considered to be an *affective state* with a *memory* component (Holak & Havlena, 1998). The structural components, contents and types of nostalgia are discussed below. Following this, a distinction between nostalgia and other constructs with which it shares some common features, is drawn.

1.2.3.1 The Structural Components

Structurally, nostalgia is made up of a complex mixture of emotion and cognition (Baumgartner, 1992; Mills & Coleman, 1994; Werman, 1977), where the emotion (affective)

component is the main focus (Batcho, 1998; Johnson-Laird & Oatley, 1989; Kemper, 1987; Ortony et al., 1988; Sedikides et al., 2004) and is produced as a result of the memory (cognitive) component that involves a reflection on objects, persons, experiences, ideas, etc., about the past (Holak & Havlena, 1998).

These nostalgic emotions are intense and can affect a person's physical sensations, along with his emotional and cognitive faculties (Peters, 1985). Besides being experienced as an emotion, nostalgia can also be experienced as a mood, i.e., a less intense, prolonged feeling (Havlena & Holbrook, 1986; Gardner, 1985).

1.2.3.2 Contents/Object of Nostalgia

Upon accepting the premise that nostalgia pertains to the past, the question then arises as to what events or objects in the past give rise to nostalgia. Nostalgia is thought to pertain to objects like people, places, physical things, ideas, or experiences (Holak & Havlena, 1998; Holbrook & Schindler, 1991). These could have been present in one's childhood (Dickinson & Erben, 2004; Kleiner, 1970; McGriff, 1997), late adolescence and early adulthood (Davis, 1979; Holbrook & Schindler, 1989; Schuman & Scott, 1989), or no particular period in life (Köneke, 2011).

A salient feature of nostalgic memories (and the focus of the nostalgic emotions) is thought to be the self, as the self is often the protagonist in nostalgic memories (Wildschut et al., 2006). Consequently, nostalgia is considered to be a self-conscious, self-relevant emotion that results from recollections of past events where the self was salient (Reid et al., 2015; Routledge et al., 2008; Sedikides et al., 2004).

Studies have found that the self, people and family feature prominently as objects of nostalgia and the events recalled often pertained to momentous past events, settings, periods in life, animals, tangibles, past selves, holidays, popular music and school-related experiences (Holak & Havlena, 1992; Wildschut et al., 2006), and the activities involved in these memories were mostly leisure activities of the past Havlena and Holak (1991). Additionally,

the contents of the nostalgic narratives are often found to include redemptive sequences, i.e., the narrative changes from a negative scene to a positive scene, rather than contaminative ones, i.e., the narrative changes from a positive scene to a negative one (McAdams et al., 2001; Wildschut et al., 2006).

The object of nostalgia can even be something that has not been personally experienced, and the nostalgic experience can also be collective in nature, i.e., nostalgia can be of different types.

1.2.3.3 Types of Nostalgia

The phenomenon of nostalgia pertains to past experiences but the content of nostalgia can pertain to things that were both personally and vicariously experienced (Baker & Kennedy, 1994; Davis, 1979; Goulding, 2001; Havlena & Holak, 1996; Stern, 1992a) through some form of media, like books, movies, physical relics or even a person (e.g., verbally shared stories with an ancestor). Additionally, the experience itself can pertain to an individual or a group. This has led to classifications of different types of nostalgia.

Holak and Havlena (1998) classified nostalgia along two dimensions: (i) nostalgia experienced directly or indirectly, and (ii) nostalgia experienced at the individual or collective level. Using these two dimensions, they developed a four-way classification of the nostalgic experience: *personal* nostalgia (direct individual experience), *interpersonal* nostalgia (indirect individual experience), *cultural* nostalgia (direct collective experience) and *virtual* nostalgia (indirect collective experience).

Direct nostalgia pertains to experiences of one's own life, i.e., the content of the nostalgic event arises from one's own autobiographical memories. Indirect nostalgia pertains to events or a time-period before one's time, for a life one has not personally experienced (e.g., feeling nostalgic for Victorian England). The former type of nostalgic experiences has also been called *personal*, *real* or *true* nostalgia, while the latter kind has been called

historical, vicarious, simulated, displaced or virtual nostalgia (Baker & Kennedy, 1994; Davis, 1979; Goulding, 2001; Stern, 1992; Vanderbilt, 1994).

Similarly, nostalgia experienced collectively by a group, i.e., a group of people is nostalgic about a common object—a past era, a place, etc.—is called *collective* or *cultural* nostalgia (Baker & Kennedy, 1994; Davis, 1979; Halbwachs, 1992; Havlena & Holak, 1996; Holak and Havlena, 1998). Collective nostalgia can be for something experienced directly or indirectly, i.e., it could be *real* or *historical*, for example, a group of students feeling nostalgic for the good old days at school reunions, or nostalgia experienced for past historical eras by attendees at a renaissance fair. Collective nostalgia can be more commonly observed when societies or countries wish to go back to a past era in their history that is deemed to be better than the present. Consequently, it has been used as a political tool. This thesis focuses on the psychological aspects of nostalgia, and therefore, it is mainly concerned with personal nostalgia experienced by an individual.

Along with distinctions between the different types of nostalgia, distinctions are also made between nostalgia and other related concepts.

1.2.3.4 What Nostalgia Is Not

Nostalgia has overlaps with homesickness, reminiscence and recollection but is also conceptually distinct from each. While the historical journey of nostalgia itself demarks it from homesickness, further evidence has been sought to empirically establish the two as separate constructs.

Davis (1979) provided evidence for a conceptual distinction between nostalgia and homesickness, by showing that people were more likely to ascribe the characteristics of ‘warmth’, ‘old times’, ‘childhood’, and ‘yearning’ to nostalgia than to homesickness. Additionally, research on homesickness mainly focusses on the psychological problems faced by someone (especially a young person) who has moved away from home and on finding strategies to cope with it. Research on nostalgia has a wider expanse, as it is experienced by

people of all ages and can pertain to object's beyond one's 'home', i.e., one can get nostalgic about people, events, as well as places beyond one's home (Hepper et al., 2012; Sedikides et al., 2004, 2008; Zhou et al., 2008).

Nostalgia is distinguished from reminiscence and recollection through its affective nature (Davis, 1977; Sedikides et al, 2004; Wildschut et al, 2006), as nostalgia involves a strong emotional experience that can affect one's physical sensations, mood, emotions, thoughts and memories (Peters, 1985). The complex mixture of emotion and cognition that makes up nostalgia (Baumgartner, 1992; Mills & Coleman, 1994; Werman, 1977) leads to an emotion-enriched recollection rather than a simple cognitive reconstruction of memories (Batcho, 1998; Johnson-Laird & Oatley, 1989; Kemper, 1987; Sedikides et al., 2004).

Memory is an important cognitive tool that allows its owner to *better* navigate the world it lives in. Therefore, when a need for information stored in the memory arises, recollection occurs. Nostalgia, then, being a special form of memory recollection, needs an explanation for what brings it to existence.

1.2.4 Causes of Nostalgia

In the psychological literature, the main line of explanation for the cause of nostalgia banks on the self-relevant feature of the nostalgic feeling, where owing to this characteristic, nostalgia is able to serve many purposes where the salience and significance of one's self is threatened, by highlighting a past version of oneself when the salience and significance of the self was not under fire. Some of the explanations that utilise the self-relevant features are contrast between past and present life, discontinuity between past and present selves and experiencing negative affect. These are discussed below.

One line of explanation contrasts between appraisals of the past and the present. Batcho (1998) proposes that nostalgia is a result of admiring the past while being dissatisfied with the present and afraid of the future. Batcho (1995, 1998) conducted studies asking participants how they would rate the world as it is now compared to 20 years in the future and

compared to when they were younger. She found that participants who had a pronounced nostalgic personality evaluated the past more favourably than participants who were less nostalgic, but that they did not differ in the evaluation of the present or the future. Therefore, she concluded that nostalgia is caused by an admiration of the past rather than having a troublesome present (c.f. Kaplan, 1987).

Godbole et al. (2006) found that people who thought positively about the past felt nostalgic when presented with a scenario of a bleak future but not when presented with a scenario of a bright future. However, such an effect was not observed in those who thought negatively about the past. This suggests that nostalgia is caused by admiration of the past rather than a fear of future. On the other hand, using open-ended questions focussed on the future, Platt and Taylor (1967) found that the more nostalgic individuals had a shorter future time-horizon, which they interpreted as lacking a future focus, thus leading people to derive pleasure from the past.

Evidence from memory research shows that general autobiographical memory is usually skewed and deceptive (Conway & Ross, 1984; Rubin & Bernsten, 2003a; Ross, 1989). The same debate is continued in the nostalgic literature regarding whether nostalgia is caused by a positive past (Glazer & Key, 1996) and a negative present, as there are reports of people feeling nostalgic about memories from war times, the holocaust (Hertz, 1990) and slavery (Wilson, 1999). Hirsch (1992) also found that nostalgia caused by smells from childhood was not dependent on whether the childhood itself was remembered in a positive light. The level of nostalgia was independent of how favourable a childhood was remembered.

Holak and Havlena (1998) have also pointed out that nostalgia is not necessarily brought about by a dearth of the nostalgic object in the present, as one can feel nostalgic for something that is still widely available in the present, e.g., Oreo cookies might remind one of childhood memories of having Oreos and thus make one feel nostalgic about Oreos even

though these are still available today. Therefore, in their view, nostalgia is not a preference for these objects but rather is a pleasurable feeling that leads one to show preferences for these things.

Another line of explanation suggest that nostalgia results from a perceived discontinuity between one's past and present selves. Davis (1979) suggested that nostalgia helps one deal with discontinuity in one's life, i.e., the experience of nostalgia ensues as a way through which to make sense of disparity between a past and present version of oneself. Such discontinuity could be a result of death of a loved one, job layoffs, ill-health, end of a relationship, moving to a new place etc. (Batcho, 1995; Best & Nelson, 1985).

Studies that looked to verify this hypothesis have found mixed results. A study by Best and Nelson (1985) did not find evidence for increased nostalgia after a change in job. On the other hand, Sedikides et al. (2008) found that participants who reported experiencing a greater number of disrupting life events (e.g., death of a loved one, divorce, etc.) also reported having more nostalgic experiences over the previous two years. Along the same line, Iyer and Jetten (2011) found that when individuals had maintained identity continuity between the past and the present, nostalgia was beneficial to their psychological well-being and perceived ability to cope with challenges but when identity continuity was low, feeling nostalgic had the opposite effect.

Another cause of nostalgia is negative affect. Nostalgia can be triggered when one feels lonely (Wildschut et al., 2006) or is reminded of one's own mortality (Routledge et al., 2008; Juhl et al., 2010). Nostalgia helps cope with thoughts about mortality and helps people see life as meaningful. However, Bassett (2006) instead found that mortality salience is more likely to increase focus on the future than on the past. In a mortality salience condition as compared to two control conditions, participants were more likely to write about something they looked forward to in the future than about something they missed from when they were younger.

Some explanations focus on the negative side of the self-relevant nature of nostalgia. The psychoanalytic school of thought views nostalgia as a form of regression, where one wishes to return to the mother's womb or to infancy (Fodor, 1950; Jackson, 1986; Kaplan, 1987; Kleiner, 1970; Peters, 1985; Sterba, 1940; 1971). The wish in turn is caused by a need to escape the present (c.f. Lowenthal, 1975) and is thought to be related to issues of loss, grief, incomplete mourning and depression (Castelnuovo-Tedesco, 1980). Similarly, Dickinson and Erben (2006) proposed that nostalgia is caused by missing one's early childhood when one received exclusive attention and love from one's mother. Consequently, nostalgia is a form of narcissism, as the affinity shown for these childhood objects or people is in effect a consequence of showing love for oneself.

Besides the psychological explanations, a sociological one attributes the cause of nostalgia to a decline in social solidarity and morality (Lane, 2000; c.f. Putnam, 2000; Shaw & Chase, 1989; Steiner, 2004; Turner; 1987). The decline leads mankind to yearn for nature, authenticity and harmony (Abramson & Inglehart, 1995; Davies, 2010; Kleiner, 1970; Newton, 2006; Peters, 1985).

In addition to explanations for *why* nostalgia occurs, the literature also considers *what* causes nostalgia, i.e., environmental triggers that elicit nostalgia. According to Belk (1990), nostalgia can be prompted by objects, scenes, smells or music. In a survey conducted by Wildschut et al. (2006), the main triggers of nostalgia were found to be negative affect, social interactions and sensory information like music and smell. A popular example of nostalgia being elicited through the gustatory modality can be observed in Marcel Proust's (1981) *Remembrance of Things Past*, where he has a nostalgic episode after having a bite of a "madeleine" that reminds him of consuming this confectionary on Sunday mornings at his aunt's place.

Related to the question of the cause of nostalgia is the question of the affective nature of nostalgia, which has also undergone transformations since nostalgia's origin.

1.2.5 Affective Tone of Nostalgia

As is evident from the earlier discussion on nostalgia's history, the affective tone of the nostalgic experience was central to its changing semantics. Consequently, a negative affective tone of nostalgia featured prominently in older literature, and with time, a positive and mixed (bittersweet) affective tone became more common.

Nostalgia as a negative affect is considered to be a form of mourning the loss of the past (Best & Nelson, 1985; Hertz, 1990; Peters, 1985). Some researchers suggest that the experience of nostalgia contains negative features like disappointments and irritations (Davis, 1977) and at its core, nostalgia is made up of sadness, distress and disappointment (Best & Nelson, 1985; Fodor, 1950; Peters, 1985). In the taxonomy of emotions, Ortony et al. (1988) categorized nostalgia as a negative well-being emotion that contains the emotions of 'distress' and 'loss'.

The prevailing notion, however, is that the affective tone of nostalgia is mixed, i.e., it contains both positive and negative emotions (Barrett et al, 2010; Cavanaugh, 1989; Hirsch, 1992; Holak & Havlena, 1992; Iyer & Jetten, 2011; Johnson-Laird & Oatley, 1989; Köneke, 2011; Nikelly 2004; Ross, 1991; Verplanken, 2012; Werman, 1977). Nostalgia is considered to have a positive emotional component with an undercurrent of loss (Johnson-Laird & Oatley, 1989). It is thought to mainly involve emotions like pleasure, warmth, joy, affection, sweetness, satisfaction, goodness, love and such positive, happiness-related emotions, which also invoke negative emotions characterised by sadness, pain and regret (Holak & Havlena, 1998; Howland, 1962; Werman, 1977).

The bittersweetness of nostalgia is thought to be caused by the simultaneous experience of sadness due to the loss of the past and the realisation that the past cannot be recaptured, while at the same time deriving pleasure from remembering the past (Dickinson & Erben, 2006; Harper, 1996; Kleiner, 1970;). Some suggest that the bittersweetness is

caused by wanting to return to the past but having to accept the present instead (Dickinson & Erben, 2006; Hertz, 1990; Radstone, 2010b; Sohn, 1983).

Even when bittersweet, the positive affect is thought to dominate over the negative affect in nostalgia (Batcho, 1995; Kaplan, 1987). Where the negative emotions of disappointments, regrets, etc. exist, they act as a lesson and are viewed through a lens of 'it was all for the best' (Davis, 1977). Wildschut et al. (2006) showed that after having a nostalgic experience, people reported having experienced more positive than negative affect.

Thus, the current view has shifted drastically from that held in the mid-twentieth century and while nostalgia was even then considered to contain some positive affect (Batcho, 1995; Gabriel, 1993; Holak & Havlena, 1998; Kaplan, 1987), with time, the emphasis on the positive tone of nostalgia has increased while that on its negative tone has decreased.

It is also pointed out that the nostalgic experience might contain more positive emotions even if the event recalled was a negative one, as negative events might also have positive aspects to them, for example, going through a negative situation and then receiving help from someone (Davis, 1979; Dickinson & Erben, 2006; Wildschut et al., 2006;). Additionally, even when the recalled event is not a negative one, the nostalgic experience might contain more positive emotions than the original recalled event, which might be distorted to be more positive than it actually was in reality (Davis, 1979).

The emotional valence of an experience is directly related to the consequence of that experience, which in turn relates to whether the experience is adaptive or maladaptive.

1.2.6 Nostalgia—Good or Bad?

In the academic literature on nostalgia, the question of whether nostalgia is adaptive or maladaptive (good or bad) has been answered mainly by looking at its cause and its consequence. These two aspects of nostalgia are, therefore, discussed below in the context of whether they render nostalgia adaptive or maladaptive.

The question of whether the cause of nostalgia is a result of gaining pleasure from thinking of the past, escaping the present or avoiding the future is a factor in whether nostalgia is adaptive or maladaptive, as it shows how happy one is with the present and the state of one's self-growth, which are indicators of adaptive or maladaptive functioning (Köneke, 2011). If nostalgia is caused by a wish to go back to the past by escaping the present, it is considered to be dysfunctional and maladaptive (Beisser, 1987; Fisher, 1991; Fodor, 1950; Kleiner, 1970; Kulish, 1989), as it then becomes a regressive mechanism (Fodor, 1950; McCann, 1941; Sterba, 1940), a hindrance to personal growth (Shabad, 1989) and prevents one from coping with the present (Köneke, 2011). The discontinuity hypothesis also renders nostalgia maladaptive, as it implies that nostalgia is an escape from the present and a result of a fear of the future (Davies, 2010; Nawas & Platt, 1965).

However, as Nikelly (2004) points out, retreating to the past and escaping from the present does not necessarily have to be a negative, regressive method as it can also be considered to be an adaptive response to dealing with stress. Similarly, Barrett et al. (2010) suggests that nostalgia is a reaction to sadness rather than a cause of it, and is therefore, a mechanism for coping with, as the more nostalgic people might have experienced even more sadness if they were not being nostalgic. However, in two different studies, trait nostalgia was not found to be related with increased levels of happiness or with an evaluation of the past in a more favourable light (Batcho, 1998); neither was it found to be correlated with life-satisfaction (Routledge et al., 2008).

Nevertheless, a second view argues that nostalgia is adaptive as it acts as a defensive emotion and helps one cope with the present (Zhou et al., 2008). Evidence for the coping function and benefits of nostalgia have been found in numerous studies (Barrett et al., 2010; Hertz, 1990; Holak and Havlena, 1998; Routledge et al., 2008; Wildschut et al., 2006; Zhou et al., 2008).

It is also theorised that nostalgia is adaptive because thinking about the past can be a pleasurable and joyful experience (Batcho & Kaplan, 1987). Perception of the past as positive or negative is also a valid factor in determining if nostalgia is adaptive or maladaptive (Godbole et al., 1997), and if the past has been negative, then believing that negative events can have benefits also becomes a factor in determining if nostalgia is good or bad (Affleck & Tennen, 1996; Hertz, 1990; McMillen, 1999; Stern, 1992). This thought is also echoed in studies that investigated whether nostalgia contains redemptive or contaminative sequences (Wildschut et al., 2006), i.e., the content of the memories can also play a role in making nostalgia adaptive or maladaptive.

Some researchers have discussed the role of individual differences in determining nostalgia as adaptive or maladaptive. Konno and Uesugi (2003) have suggested that being in harmony with one's mind and body allows one to experience more of the positive aspects of nostalgic experiences. Therefore, nostalgia might only have positive effects when one is in harmony with oneself. Similarly, Sohn (1983) and Nikelly (2004) have suggested that nostalgia is maladaptive only if it takes the place of mourning and is caused by refusal to accept a loss. Some evidence for this has been obtained in different studies that have found that nostalgia can be beneficial only when an individual experiences high levels of identity continuity (Iyer & Jetten, 2011) and were not habitual worriers (Verplanken, 2012).

Besides the cause and consequence, the role of the affective component of nostalgia has been acknowledged as a factor that determines if nostalgia is adaptive or maladaptive. The strong emotional signature of nostalgia (Davis, 1977; Wildschut et al., 2006) makes it an extremely potent stimulant or poison (Howland, 1962), an asset or a curse (Köneke, 2011) that is capable of affecting one's current physical state and cognitions (Peters, 1985). In addition, Peters (1985) have suggested that it is the quantitative differences (i.e., frequency) of nostalgic experiences and not qualitative differences that make it adaptive or maladaptive. Nostalgia in this account becomes maladaptive only at a higher frequency.

Thus, depending on which aspects of the nostalgic experience prevail, nostalgia can be considered to be both adaptive and maladaptive. This has led some researchers to suggest that there are two different forms of nostalgia—pathological and normal (Hirsch, 1992; Kaplan, 1987; Nikelly, 2004; Werman, 1977; Sohn, 1983). Nostalgia is adaptive if one is able to accept the present instead of escaping it, if nostalgia results in positive affect and pleasure, and increases happiness and life satisfaction (Mills & Coleman, 1990; Sedikides et al., 2008); but if one is trying to escape the present when nostalgic then its negative consequences become more salient.

In recent years the adaptive view of nostalgia has become predominant and its benefits or utilities have been widely researched. These are discussed in brief in the next section.

1.2.7 Benefits (Utility) of Nostalgia

Psychological research on the functions of nostalgia has discovered many benefits of the experience. Nostalgia acts as a coping mechanism that reduces negative affect and contributes towards self-positivity.

Nostalgia has been found to help combat loneliness (Bender et al., 1999; Zhou et al., 2008), deal with disrupting life events (Sedikides et al., 2008), the concept of mortality (Juhl et al., 2010; Routledge et al., 2008) sadness and negative mood (Wildschut et al., 2006). Nostalgia is theorised to be an adaptation that helps deal with any form of loss (Howland, 1962), and especially helps cope with the loss of one's childhood (Kaplan, 1984), i.e., it combats the 'Peter-Pan-Syndrome' (Kulish, 1989) and enhances individualisation (Peters, 1985).

It has been found to be a repository of positive feelings that contribute to self-positivity by increasing self-esteem and it also strengthens social connectedness (Wildschut et al., 2006). These features of improving self-esteem and social connectedness have been suggested to be one of the mechanisms through which nostalgia brings about its benefits, as it helps connect to other people (Batcho, 1994, 1998; Cavanaugh, 1989; Mills & Coleman,

1994; Peters, 1985; Wilson 1999). Nostalgia reminds people of their past selves, which provides further guidance for the future (Hertz 1990; Mills & Coleman, 1994; Rosen, 1975). Consequently, it provides continuity during life-stage changes (Batcho et al, 2008; Davis, 1979; Nikelly, 2004; Sedikides et al., 2015) and helps fight negative affect.

By helping one to connect to other people, nostalgia also increases one's perception of how capable one is of providing emotional support to other individuals (Wildschut et al, 2010), and consequently, also increases people's charitable tendencies, resulting in larger donations (Merchant & Ford, 2008).

Some recent studies (e.g., Iyer & Jetten, 2011; Verplanken, 2012) have found that nostalgia can be beneficial but conditions apply. Sedikides et al. (2008) found an association between nostalgia and life satisfaction, where nostalgia enhanced continuity between past and present selves in those who were more satisfied with life but not in those who showed lower satisfaction.

Beyond the psychological benefits, nostalgia has also found utility in marketing and media. Taking advantage of the emotional appeal of nostalgia to past selves, it has been widely used as an advertisement and marketing tool (Havlena & Holak, 1991; Holbrook & Schindler, 1991; Muehling & Sprott, 2004; Stern, 1992) and in different forms of media (movies, plays, TV shows, etc.) based in past eras, as these are popular among consumers and viewers (c.f. Cook, 2005; Higson, 1996; c.f., Köneke, 2011; Radstone, 2010a; Rosenthal, 1981) and thus lead to increased product sales.

Nostalgia is thought to be both a cause and effect of increased creativity (Stephan et al., 2008) and artistic tendencies (Abbott, 2010; c.f. Goodman, 2008; Köneke, 2011; O'Sullivan, 2010) but there is as yet no empirical evidence on this front. However, nostalgia has been found to be a factor in artistic tendencies, and vice-versa. This, and some other factors affecting nostalgia, are discussed next.

1.2.8 Factors Affecting Nostalgia

Studies have looked at how nostalgia varies with demographic variables, the Big Five Personality dimensions and other personality traits. However, the evidence is not yet very clear (Davis, 1979; Köneke, 2011).

Age. Age is considered to be a significant factor affecting nostalgia, in terms of both frequency and content of the nostalgic experiences. It has been hypothesized that older people are more nostalgic (Davis, 1979) but evidence for this hypothesis has not been found (Goulding, 2002; Holbrook, 1993). Evidence for the contrary was obtained by Batcho (1995) who found younger people to be more nostalgic, which might have been because this demographic experiences more life-stage transformations. In this study, age was also found to be relevant to the content of the nostalgic experience, where older people were less nostalgic for pets, holidays, and toys but more nostalgic for music.

Köneke (2011) discusses the role of age in nostalgia in the context of socioemotional selectivity theory (Carstensen et al., 1999), which proposes that with increasing age people consider their days to be limited, so they move from future-oriented, knowledge-related goals to figuring out the meaning of life and being a part of a social network. This can be relevant in nostalgia, in terms of the frequency and content of nostalgic experience and the importance placed on nostalgia with increasing age. That is, older individuals who are more likely to experience social isolation and physical immobility, might experience more frequent nostalgia, might recall more nostalgic events involving social interactions and might place more significance on those experiences, which might be a consequence of failing to have a proper social network that they might have come to value. More frequent nostalgic experiences and greater significance placed on nostalgia are characteristics of trait nostalgia. It has been hypothesized that people are more nostalgia-prone in their middle age and after retirement (Holak and Havlena, 1992).

Hirsch (1992) found a difference in nostalgia-evoking stimulus with increasing age; people born in the 1960s and 1970s showed a lower likelihood of nostalgia evoked through natural smells than people born in the 1920s–1940s.

Gender. The influence of gender on nostalgia is tied to the history and meaning of nostalgia, as in olden times, men travelled more than women and so were supposed to be more nostalgic than women (Davis, 1979). However, some studies have found that women are more nostalgic than men (Batcho et al. 2008; Holbrook, 1993), while others have not found any influence of gender on nostalgia-proneness (Batcho, 1995; Batcho et al., 2008; Sherman & Newman, 1977; Wildschut et al., 2006) but have found an effect on the meaning (Greene, 1991; c.f. McDermott, 2002) and the content of nostalgic experiences (Baker & Kennedy 1994; Havlena & Holak, 1991; Sherman & Newman 1977).

Education. Level of education has been hypothesized to be a factor in nostalgia, which, again, is tied to the history and meaning of the latter. The less educated were thought to be more nostalgic, when nostalgia equated to homesickness (McCann, 1941). However, the more educated (or intellectuals) have been hypothesized to be more nostalgic in terms of its current meaning (i.e., yearning for the past) (Turner, 1987). The concept of ‘melancholia’, which has overlaps with nostalgia, is also considered to be more prominent in philosophers and intellectuals like Aristotle, Kant, Nietzsche and Heidegger (c.f. Klibanzky et al., 1988; Turner, 1987).

Big Five Personality Dimensions. The neuroticism dimension of the Big Five Personality traits (Goldberg, 1990) has been found to be positively correlated to nostalgia. McCann (1941, 1943) concluded that nostalgia is related to emotional instability, through a review of the literature and through empirical observations; however, his findings referred to nostalgia as homesickness. Nevertheless, more recent studies have also found a correlation between nostalgia-proneness and neuroticism (Barrett et al., 2010; Köneke, 2011). Barrett et al. (2010) found that nostalgia was associated with the sadness dimension of the Affective

Neurosciences Personality Scale (ANPS, Davis et al., 2003), such that sadness was found to effect nostalgia. This further adds to the evidence for a relation between nostalgia and neuroticism (Köneke, 2011), as the latter is characterised by negative emotions like sadness, fear, depression, etc. (Costa & McCrae, 1980; Martin, 1985).

McCann (1941, 1943) concluded that nostalgia is positively correlated with introversion. However, Batcho (1998) found that the more nostalgia-prone individuals showed a higher preference for social activities over solitary ones. McCann (1943) also reported a similar finding where the more nostalgia-prone individuals showed a dislike for solitude even though he found them to be more introverted.

Köneke (2011) says that nostalgia can be expected to be correlated to openness, as artists and literary figures are generally more open-minded and nostalgia is often prominently featured in art (e.g., Proust, 1981; Shakespeare, 1609/1996; c.f. Goodman, 2008). McCann (1943) found some evidence that the nostalgic participants were more imaginative than the non-nostalgic ones. However, Barrett et al. (2010) did not find any association between nostalgia-proneness and introversion, openness, agreeableness or conscientiousness.

Other factors. Nostalgia has been found to be negatively correlated with trust (Fetchenhauer & Dunning, 2009) and belief in a just world (Köneke, 2011). Nostalgia has been found to be positive correlated with need-to-achieve (Batcho, 1998), a normative identity style (Batcho et al, 2008), authoritarianism (Köneke, 2011), and has been associated with similar traits like conservatism (Allen et al., 1995; Bonnett, 2009; Greene, 1991), stereotyping (Coontz, 1992; DaSilva & Faught, 1982) and cynicism (Batcho et al, 2008; Hutcheon, 1998). Wildschut et al. (2010) found an association between nostalgia and attachment styles, where *loneliness* and *perceived ability to support others* showed a positive correlation with nostalgia in those who were low in attachment–avoidance but not in those who showed high attachment–avoidance.

Some studies have looked at the relationship between trait nostalgia and musical and artistic preferences. Batcho (2007) found a relationship between personal nostalgia and a preference for happy and ‘related’ (social-setting) songs and one between historical nostalgia and sad songs. Specht and Kreiger (2016) found that higher levels of historical nostalgia were related to a preference for artwork that included human figures than for those without, as the former were considered to be more thought-provoking. Their findings also suggest that nostalgia contains a component of social connectedness.

Trait nostalgia is associated with lower self-esteem, according to Platt and Taylor (1967), but indulging in a nostalgic experience (state nostalgia) has been shown to increase it (Wildschut et al., 2006, 2010; c.f. Vess et al., 2008). However, in later studies, self-esteem and trait nostalgia have not been found to be correlated (Routledge et al., 2008).

Culture is also assumed to be a factor in nostalgia, as nostalgia is considered to be a secondary emotion, i.e., interpretation of the tone of the nostalgic feeling can be dependent on cultural perceptions of nostalgia (Dickinson & Erben, 2006; Johnson-Laird & Oatley, 1989; Kemper, 1987; Köneke, 2011).

Thus, the research on nostalgia has identified some of its factors, causes and benefits, but much is left to explore. The following section discusses some of these aspects of nostalgia that still need examining and sets the main objectives of this thesis.

1.3 Research Objectives

To sum up, the changing meaning of the concept of nostalgia has left a trail of confusion in the academic literature on nostalgia, mainly with regards to the affective nature of this phenomenon and its adaptive/maladaptive nature. With increasing numbers of psychological studies on the matter in recent years, some of these confusions have been addressed, but not resolved. While it is now accepted that nostalgia contains mostly positive affect (Wildschut et al., 2006) and also includes some negative affect (Batcho, 1995; Kaplan, 1987), studies have found mixed evidence for its adaptive/maladaptive nature (e.g., Iyer &

Jetten, 2011; Köneke, 2011; Verplanken, 2012). The current literature suggests that nostalgia can be beneficial to the individual experiencing it (Holak & Havlena, 1998; Routledge et al., 2008; Wildschut et al., 2006; Zhou et al., 2008) but there are caveats, as certain trait (Iyer & Jetten, 2011; Verplanken, 2012) factors can have a moderating effect on the benefits of nostalgia.

The existing psychological literature on nostalgia has explored some of the content, triggers, functions and factors of nostalgia. However, while the functions and factors that influence nostalgia have received attention, the *cognitive* components and *affective* nature of the experience have only been minimally explored and the *motivational* nature and *phenomenology* of the experience has been neglected.

The cognitive realm of nostalgia is often the point of interest for the person experiencing it. However, the affective realm is what makes it interesting and the motivational realm is what gives it power. In the original concept of nostalgia, the underlying motivation (the yearning component) was to return to the past, which was a defining feature for nostalgia being maladaptive, along with its negative emotional nature. The yearning component of nostalgia was an important feature as it gave nostalgia the ‘power’ of moving one to wanting to return home with such intensity that it made one sick, so much so that it was a potential medical disease. Although the concept of nostalgia has evolved from a disease to a normal phenomenon, from a negative experience to a positive or mixed one, and from definitely being a curse to possibly a coping mechanism, the yearning component of nostalgia (i.e., the motivational nature of the nostalgic experience) has not been questioned. Is there still a component of yearning in nostalgia, now that it is considered to be a beneficial coping mechanism? If there still is one, what does it look like? Does the experiencer yearn to return to the past? If they do, how does the experience still result in benefits for them?

Another feature of nostalgia that makes it a moving experience is its phenomenological nature, as the nostalgic experience involves strong physical sensations and feeling of

travelling back through time and reliving the past, which distinguishes it from general autobiographical memory recollection. The phenomenology of nostalgia has also not received much attention in the psychological literature.

While the effect of different affective states on nostalgia and vice-versa, has received attention, the affective nature of state nostalgic experiences has mostly been explored in the context of functions it serves. Given the breadth of nostalgic experiences, which vary in terms of triggers, objects and affective tone, and also depend on trait and situational factors, the state nostalgic experience itself, rather than its causes and effects, deserves more exploration. That is, a more in-depth look at the triggers that elicit nostalgia and how the state nostalgic experience differs (in terms of its cognitive, affective and motivational nature) depending on the trigger and relevant trait factors of the individual should aid our understanding of what makes nostalgia a normal, universally-experienced phenomenon, as opposed to a disease.

Therefore, this thesis envisions an understanding of the operational process of nostalgia in terms of its cognitive and experiential nature (i.e., affect, motivation and phenomenology), through an exploration of state nostalgia, along with an account of the influence of pertinent trait factors, including trait nostalgia.

To this end, two studies were conducted. Study 1 (Chapter 2) was an exploratory study where some of the concepts found in past research were verified and preliminary evidence was obtained for some unexplored aspects. Study 2 was the main experimental study that tackled the principal research questions of interest. Chapter 3 provides some additional literature review on autobiographical memory research that is relevant to the concepts investigated in Study 2, and discusses the research questions and methodology for Study 2. Chapters 4 and 5 discuss the results of Study 2. Chapter 6 discusses the general implications of this research work.

2 Chapter 2: Study 1—Construct Elaboration: A First Point of Enquiry

2.1 Introduction

Previous research established some of the contents of nostalgic events (Wildschut et. al., 2006), triggers (Hirsch, 1992; Holak & Havlena, 1992; Wildschut et. al., 2006), affective nature of the experience (Barrett et. al., 2010; Batcho, 1995), and frequency of the experience (Batcho, 1995; Köneke, 2011). The cognitive and motivational components of nostalgia did not receive much attention, however. This study was conducted to explore the motivational aspect of nostalgia, to see if there is a component of yearning in the nostalgic experience. The study aimed to examine the experiential nature of nostalgia, with an emphasis on the motivational intentions expressed in general nostalgic experiences and intentions towards specific time-periods of life. Along with the motivation, the affective nature was also further studied to explore if certain factors of the experience are associated with certain affective natures.

It was suggested that there are cultural differences in nostalgia, especially in the perceptions of the meaning of nostalgia (Johnson-Laird & Oatley, 1989; Köneke, 2011). However, although different studies on the topic were conducted in different countries—the UK (Wildschut et. al., 2006), China (e.g., Zhou et al., 2008), the US and Russia (e.g., Holak & Havlena, 1998; Holak et al. 2005)—therefore in different cultures, the influence of culture on nostalgia itself was not studied. In this study, a multicultural sample was used to explore if there is any difference in cultural perception of the meaning of nostalgia.

The literature on nostalgia provides a case for historical nostalgia as well as personal nostalgia. However, the former did not receive much attention in psychological research; rather the focus was on a comparative evaluation of attitudes toward the past, the present and the future (e.g., Batcho, 1998). This study also examined how prevalent the phenomenon of historical nostalgia is, the past eras that give rise to it, whether it involves a preference for

physical objects from past eras, and whether it eventuates from a disparity in the appraisal of the past and present eras.

This study used interviews to survey these unexplored aspects of nostalgia. In addition, some questions asked in the interview pertained to aspects that were already studied in previous research. These included the aspects of the trigger, object and frequency of nostalgia. This was because not many psychological studies explored the structure of nostalgia. Therefore, the cognitive structure of nostalgia and its affective and motivational natures, for both the event in the past and the recalled experience in the present, were explored.

The components of nostalgia that were examined in this study were—the environmental causes (triggers), the content of the event one is nostalgic about (object), the valence of both the event and the experience (affect), the intention towards this event that prevails during this experience (motivation) and the regularity of this experience (frequency). Evaluative judgements about different past eras (one's own personal past and historical past before one's birth) that act as objects of nostalgia were also studied.

Overall, the main aim of this study was to gain an understanding of what it means to be nostalgic. What does the experience entail for someone who is feeling nostalgic?

2.2 Method

2.2.1 Sample

Fifty-two participants of different nationalities—16 Germans, 12 Indians, 8 Malaysians and 16 New Zealanders—were interviewed. Participants were recruited through a convenience sampling method—16 answered a call for participation on a community blog post; 15 were recruited from public places in Christchurch and 21 participants interviewed were acquaintances of the researchers. Participants were nearly evenly split in terms of gender—25 females and 27 males, and their ages varied from late teens to late eighties. The

age range of 20–29 years comprised the largest group (18 participants) and there were 8, 5, 6 and 9 participants, respectively, in the age-ranges of 17–19, 30–39, 40–49 and 50–59 years. Six participants were of or above the age of 60. The median age was 30 years. To look at age differences, a median split produced a “younger” group with participant ages ranging from 17–30 years, and an “older” group with ages 31–87 years [$N = 26$, for each group].

Germans and New Zealanders were interviewed in their home countries and all of the Malaysian participants were expatriates living in Christchurch, New Zealand. Of the Indians interviewed, 8 participants were living in their home country and 4 participants were residing overseas—2 in New Zealand, and 1 each in Australia and Singapore. Although there were slight differences in group size among the different combinations of the three demographic variables, for the most part they were fairly equal.

2.2.2 Questionnaire

The interview questions pertained to nostalgia in terms of its “definition” (e.g., “What do you understand by nostalgia?”), “object” or “content” (“What do you generally get nostalgic about?”), “motivational nature” or “experience” (“Could you describe the experience of being nostalgic?”), “triggers” (“What causes you to become nostalgic?”) and “frequency” (“Do you get nostalgic? How often would you say you do?”). Questions on nostalgia and past eras were regarding one’s own “personal past” (e.g., “Do you ever wish to go back to childhood? Do you think of your schooldays?”), and a “historical past” era before one’s birth (“Do you ever get nostalgic about a past era, a time before you were born? Do you like antiques or vintage products? Do you enjoy movies/books depicting a past era?”).

In all, there were 15 questions with some sub-questions—which were “pointers” or prompts to help the participants answer accurately, when they did not follow what was asked or did not provide a complete answer. Most of the answers were binary (yes/no) or had nominal categorical answers (“a”/“b”/“c”/...). A few answers were in the form of statements

or descriptions. These are summarised in Tables 1 to 4 below. All interview questions (in bold) and pointers (in italics) are given verbatim in the results section.

2.2.3 Procedure

The interview started with a brief statement of its purpose, following which, consent for participation and audio-recording was obtained. Forty-two interviews were conducted face-to-face—all the Germans and Malaysians and 1 Indian were interviewed at home; 1 Indian and 1 New Zealander were interviewed at the University of Canterbury; the other 15 New Zealanders were interviewed in public places in Christchurch. The interviews for the other 10 Indians were conducted over the phone, while they were at home. One interviewer collected data from the Indian and Malaysian participants and another interviewed the Germans and New Zealanders. The German participants were interviewed in German, and New Zealanders and Malaysians were interviewed in English; 3 Indians who did not speak fluent English were interviewed in Bengali and the other 9 answered in English.

The interviews were transcribed and coded by the respective interviewers. Most of the questions required a ‘yes’/‘no’ answer. For questions that could have answers of multiple categories, e.g., object and trigger of nostalgia, only the categories mentioned were noted down by the interviewer. However, later on in the data collection process of the study, for some questions that could have answers of multiple categories, the interviewers also asked for ‘yes’/‘no’ responses to the different categories mentioned by participants that were interviewed early on in the study. Although most answers were coded at response itself, inter-rater coding checks were also carried out on a sub-sample of the recorded interviews, and an inter-rater reliability of over 90% was observed at the initial step.

After the first few interviews, some other questions were added as these were deemed to be pertinent to the study objective. Hence, data on Questions 7 to 10 are missing for the Malaysian participants (the first 8 interviewees). Participants were allowed to answer a question in as much detail as they wanted and in this process they often went on to raise and

answer some of the questions that the researchers would have later asked them. When the later questions were redundant, the researchers omitted them.

2.3 Results

The answers to the interview questions are given below, in the form of frequency distributions. The overall sample size was 52 but not all respondents answered all questions which resulted in different sample sizes for each question. Therefore, the number of respondents for each question is indicated by [N], along with the frequency distribution. Answers to some of the open-ended questions have additional information on how many respondents gave a particular response, which is indicated by [n], along with the original response. The questions below are grouped by the theoretical concept they correspond to, rather than their order in the questionnaire.

2.3.1 What is Nostalgia?

(1) What do you understand by “nostalgia”? *Pointers: Memories, of what? Feeling, what kind—happy or sad?*

The majority described it as “thinking of the past” (73.1%), 11.5% said it is “thinking about old things”, 3.8% said “thinking of childhood” and the rest mentioned a combination of “past” and “old things/childhood” (N = 52).

Descriptions of the valence of the nostalgic feeling were nearly evenly split (N=46) between happy (47.8%) and mixed (52.2%). No-one called it a purely unhappy feeling. There was a significant difference between nationalities (χ^2 (2, N = 44) = 13.582, $p < 0.01$). New Zealanders were more likely to say it is a happy feeling (81.3%) and Germans and Indians were more likely to say it is a mixed feeling (81.3% and 66.7%, respectively). Data on this variable were only available for two Malaysians, who described it as happy, and they were excluded from the chi-square analysis.

(2) Is the memory you recall always of a happy time?

The majority of the participants (73%; N = 44) said that events recalled during a nostalgic experience did not have to be happy.

(3) Was there a time in your life when things were not running smoothly? When you think of this time in your life, do you just recall it to be a troubled time or do you also recall some of the happy or normal or day-to-day events which were just bearable or kept you going during this troubled time? Would you say you ever get nostalgic about these “normal” or “bearable” events too?

Most participants had had a troubled time in their life (86%; N = 44). Of these, 74% recalled happy or normal events from this troubled time and 64% got nostalgic about these happy or normal events from the troubled time.

(4) Do you ever get so nostalgic about something that you start feeling sad/depressed?

Most participants (77%; N = 44) reported that they do occasionally get sad or depressed from being nostalgic.

2.3.2 Objects of Nostalgia**(5) What do you generally get nostalgic about? *Pointers: People? Place? Events? Time?***

As shown in Table 2.1, the participants reported feeling nostalgic about different things, but “people” and “events” were the most common objects of nostalgia.

Table 2.1. Frequency Distribution of Responses to Objects of Nostalgia.

Object	No. of Responses	‘Yes’ (%)
	[N]	
People	52	77
Place	52	69
Events	52	75
Time	52	62
Daily Routine	44	52
Physical Objects	52	62
Pets	52	7

To further explore the objects of nostalgia, participants were asked about more specific activities from past time-period—a daily routine in the past (a more precise measure of a “past time-period”) and about physical objects they possessed in the past.

(6) Do you get nostalgic about just normal day-to-day things or daily routine things from past?

About half responded that they get nostalgic about a daily routine from the past (52.3%; N = 44).

(7) Do you ever get nostalgic about an object, a possession of yours which you no longer have now? Could you please describe the experience?

More than half (62%; N = 52) got nostalgic about a lost possession of theirs. Of these 43% said they wished they could get this object back. Some of the physical objects that were missed from the past included a vehicle [n = 8], one of which was a bicycle; childhood items [n = 6]; clothes [n = 3]; toys [n = 3]; game console [n = 2]; phone (Nokia 6600); tribal necklace; DVD; jewellery; house. As shown in Table 1, some participants also mentioned that they became nostalgic about pets they had in the past.

2.3.3 Triggers of Nostalgia

(8) **What causes you to become nostalgic?** *Pointers: Photographs? Media? Physical objects? Music? Smell? Food? Random thoughts? Conversations? Events? Places?*

This question was only asked of some of the German and Indian participants and no Malaysian and New Zealanders answered it. The results are described in Table 2.2. Music and smell were the most popular triggers. Three participants, when asked if “photographs” were a trigger of nostalgia, replied that it used to be a more potent trigger than it is now. In this digital age, they feel, they are desensitised to photographs because of the incessant visual stimulation they receive through social media. One participant also added that photos in general are no longer something she pays a lot of attention to, or registers in her mind as a result of “too many photographs, too many images always crowding your mailboxes and your system”. Although not many participants mentioned “being alone” as a nostalgia trigger [$n = 7$], those who did, described it as one of the most potent triggers for them.

Table 2.2. Frequency Distribution of Responses to Triggers of Nostalgia.

Triggers	No. of Responses [N]	No. of Responses for ‘Yes’
Music	19	16
Smell	19	14
Photographs	20	11
Places	11	10
Random Thoughts	19	9
Food	19	8
Physical Objects	19	8
Media	15	8
Events	17	8
Conversations	13	8
Being Alone	7	7

2.3.4 Motivation of Nostalgia

(9) Could you describe the experience of being nostalgic? *Pointers: Want it back? Relive it in mind but do not really want it back? Plan for something similar in future?*

Want to go back. Less than half said that they wish to go back to the past when they are nostalgic (41.7%; $N = 48$). Women were more likely to wish to go back (59%) than men (27%; $\chi^2 (1, N = 48) = 5.073, p < 0.05$). Four women added that being nostalgic is simply a wish to go back to the past, and not reliving it in mind.

Relive in mind. The majority (92%; $N = 48$) said that being nostalgic involves a reliving the event in mind but for some (58%) it is only a wish to relive it in mind without any yearning to go back. Males were more likely to only wish to relive the event in mind (68%) than females (32%). For some (33%), nostalgic experiences comprise both reliving it in their mind and wanting to return back to that past time.

Respondents who wished to relive an event in mind but not return to it were asked if that would not simply mean recalling an event. Such probing, however, showed that the nostalgic recall is still characterised by a strong affective state and a motivational state of wanting to momentarily witness the event again. Some of the descriptions given were—“wish to float through in a bubble and see myself do all of it”, “watch it like a movie playing in front of me”, “want to see it happen, like ‘Bran’ in ‘Game of Thrones’ can see but not exactly go back to it”.

Plan similar events in future. A third aspect of nostalgic motivation was a wish to experience similar events in the future (52%; $N = 44$), for example by going back to places or meeting up with people again. Those who wished to plan similar future events were more likely to “relive the event in mind” (61%) than show *both* motivations of “wishing to go back” and “relive” (39%). Younger people were more likely (70%) to plan similar events for the future than older people (37.5%; $\chi^2 (1, N = 44) = 4.619, p < 0.05$).

These results showed that being nostalgic can mean enjoying the experience of reliving it in the mind, rather than wishing to return to it, although sometimes it is both and sometimes it is only a yearning to return. At other times, it also includes future intentions, and wishing to plan similar events for the future.

2.3.5 Frequency

(10) Do you get nostalgic? How often would you say you do? Pointers—Often?

Sometimes? Rarely? Never?

The answers were recorded as “often” (coded 1), “sometimes” (coded 2), “rarely” (coded 3), “never” (coded 4), and the overall mean of 1.88 (SD = 0.65, N = 51) was in the “sometimes” range. Only one participant claimed to have never experienced nostalgia.

2.3.6 Personal Past

(11) Do you ever wish to go back to childhood? Do you feel childhood was a lot simpler, easier, better than adulthood?

Want to go back. More than half said they said they do not wish to go back to childhood (55%; N = 51). A few (n = 4) did not wish to go back but wanted to “see themselves as a child”.

Simpler, easier, better. The majority thought childhood was simpler (77%; N = 48) but a few thought it was equal in complexity to adulthood (6%). Less than half thought it was easier (47%) and a few thought it was equally hard (8%). A little more than half thought it was better (58%), and some thought it was just as good (12%).

(12) Do you think of your schooldays? Want it back?

Most respondents did think about their schooldays (86%; N = 50) but the majority did not wish to go back to it (66%; N = 47). A few (4 Indians) said they would like to go back to some aspects of school but not the academic part of it.

2.3.7 Nostalgia and the Historical past

(13) Do you ever get nostalgic about a past era, a time before you were born? Do you think the past was a better time? When and why?

Less than half got nostalgic about a historical past era (48%; N = 46). One half thought past historical eras were not better (50%; N = 44), a handful thought they were (11.4%) and a few thought they were better only in some ways so they prefer the current age (27.3%). Others thought the past is not comparable to the present (11.4%).

When. Across nationalities, the predominant eras that the participants wanted to return to were the late 19th century and the early-to-mid 20th century. However, a few mentions of ancient civilisations, and, medieval times were also made. While all the New Zealanders only wished to return to past eras from their own culture, the Germans and Indians wished to return to past eras of other cultures besides their own, namely, late 19th and early 20th centuries of America and England, respectively. Besides the past, one respondent showed nostalgia for the present with a role-reversal for herself. As a current high school teacher, she wished she was a student instead, so that she had access to all of the technology and learning tools that are available in classrooms these days. A complete list of these responses is available in Table 2.3.

Table 2.3. List of Responses to Historical Past Eras that Are Appreciated and the Reasons for Appreciation of the Past Eras.

Nationality	Historical eras	Why
Germans	• ‘Bismarck era (1871-1918)’.	• ‘More’: ‘calm and rest’, ‘family cohesion’,
	• ‘Flower Power - era of Alice Schwarzer (1960’s)’.	• ‘Less’: ‘meritocracy, stress, technology and media’,
	• ‘Charleston era (1920’s)’.	‘consumption and
	• ‘past Japan’.	materialism’, ‘bureaucracy and
	• ‘past London’.	for the fashion’, ‘loyalty and honesty between friends and

	<ul style="list-style-type: none"> • 'Rwanda during civil war'. • 'Industrialisation'. • 'ancient Egyptians, Sumerians, Babylonians, Greeks, Romans, Indians, Mayans, Incas'. • 'the times of kingdoms and castles' 	<ul style="list-style-type: none"> family, older values, relations today are too superficial' • 'No': 'constant availability', 'weapons of mass-destruction' • 'Better': 'fashion and music was', 'culture, values and ideas of morality'. • 'some of the knowledge - like boatbuilding - is lost'.
Indians	<ul style="list-style-type: none"> • 'Time of monarch rule'. • 'Mohenjo-Daro era'. • 'Victorian England'. • 'Pre-independence India'. • 'Renaissance'. • 'Ancient Rome'. • 'Present day classrooms'. 	<ul style="list-style-type: none"> • 'Less': 'technology, media, and politics', 'pollution'. • 'Life': 'was simpler', 'not so fast'. • 'People': 'were genuinely happier', 'could go out on expeditions to discover new land and seas'.
New Zealanders	<ul style="list-style-type: none"> • 'World Wars'. • 'late-1800's'. • 'early-20th century'. • '1940's', '1950's', '1960's', '1970's'. 	<ul style="list-style-type: none"> • 'More': 'freedom', 'space', 'places were undiscovered', 'face-to-face communication'. • 'Less': 'control', 'stress, materialism, violence and no drugs', 'population', 'displaced people'. • 'Better': 'clothes, manners, protocols and courtesy of the time in general', 'sense of community', 'family planning and job opportunities', 'cars'. • 'technology has taken over now'.

Why. The reasons for wishing to return to a past historical era were quite similar among individuals and across culture, even if the eras themselves varied. (See Table 3) Features of the reasons include:

Technology and its effect. One of the main reasons people prefer the past is owing to a dislike of the effects that technology has had on human lives, rather than a dislike for the technology itself. A popular perspective is that “technology has taken over our lives now” and with “less technology”, there was “no constant availability” but “more face-to-face communication”; and “less media” and “politics” in daily life. There were also “no weapons of mass-destruction” and “less violence” was prevalent in the world before.

Quality of life. A second reason for preferring the past was the social environment and the quality of life back then. The argument being that “life was simpler” and “not so fast” in the past, as there was less “control”, “bureaucracy”, “meritocracy”, “materialism”, “consumption”, “stress”, “pollution”, “population” and “no drugs”; and more “freedom”, “space”, “calm and rest” and opportunities for “job and family planning”, in society.

Interpersonal relations. The past was also credited with having better social and interpersonal relationships. People were thought to have been “genuinely happier” as they were “less displaced” and there was a “better sense of community”, more “family cohesion”, “loyalty and honesty between friends and family”. With an absence of these “older values” and “ideas of morality”, “relations today are too superficial”.

Culture. Another reason for preferring the past was for its cultural values. “Cars”, “fashion”, “music”, “clothes”, “manners, protocols and courtesy of the time in general were thought to be better”.

Knowledge. A less common reason for preferring past eras was for the opportunity to know what was unknown. In the past “more places were undiscovered” and “people could go out on expeditions to discover new land and seas”. Another side of the same coin is the wish

to go back to the past to know again what has now become unknown as “some of the knowledge” which a few ancient civilisations possessed “like boatbuilding - is now lost”.

(14) Do you like watching movies and/or reading books depicting past era? What kind? Why?

The majority enjoy movies and books depicting the past (87.5% and 82.5%, respectively, N = 40) and a little more than half get nostalgic from watching these movies or reading these books (52.6%).

What. The responses to movies and books about the past which they enjoyed corresponded to the past eras mentioned before. Books and movies describing life, culture, values and political events (movements and wars) of 19th and 20th century England, Scotland, America, Germany, India and Japan were some of the common mentions. These were enjoyable because they were thought to be a “stimulating and interesting” way through which one can “escape the current world” to “observe the past way of life” and the extent to which “the world has changed with time”, as “learning about these eras” “help keep our standards up”. Reading books about World Wars also help people to see how things were for their grandparents. A slightly different reason cited for enjoying English classics is not because of the content but the writing style, in particular, “the linearity and compactness in them whereas modern books and movies are extremely fragmented”. A complete list of these responses is available in Table 2.4.

Table 2.4. Movies and Books about the Past that Are Appreciated and the Reasons for Appreciation of These Media.

Nationality	Books/Movies	Why
Germans	• ‘middle ages’.	• ‘values of chivalry, freedom-loving, optimism’.
	• ‘20 th /21 st century, antiquity’.	
	• ‘Colonialisation’.	• ‘helps us see how things were’.
	• ‘Nazi Germany’.	• ‘simplicity of middle ages’.
	• ‘Golden 50’s’.	

	<ul style="list-style-type: none"> • ‘Perfume’, ‘Die Wanderhure’, ‘Sissi’. • ‘past London’. • ‘World Wars’. • ‘Railway Development’. • ‘Jurassic period’. • ‘Charleston era’. • ‘past Japan’. • ‘history books’. 	<ul style="list-style-type: none"> • ‘learn about the knowledge and achievements’. • ‘the difference to life nowadays from the time of colonisation’. • ‘feel grown up as have experienced this time – 2000’s’. • ‘reminisce in past time’. • ‘distraction’. • ‘get an idea of what that time was really like’.
Indians	<ul style="list-style-type: none"> • ‘India before independence’. • ‘Modern India after Independence’. • ‘English Classics’. 	<ul style="list-style-type: none"> • ‘for the concept of the past, but not the reality of it’. • ‘nice to have an insight’. • ‘shifting landscapes of post-Independent India, because of the magnitude of changes that happened while India was coming out of colonial rule’. • ‘quality of movies and editorials were better, now it is a lot more, media-driven’. • ‘love reading English classics because they were linear and compact, modern books and movies are extremely fragmented’.
New Zealanders	<ul style="list-style-type: none"> • ‘World Wars’. • ‘1700 Scotland’. • ‘medieval time’. • ‘1940’s-1970’s’. • ‘early-20th century’. • ‘1920’s’. 	<ul style="list-style-type: none"> • ‘learn about these eras’. • ‘see how it was’. • ‘for the wars and weapons’. • ‘see changes in time’. • ‘picture in head how it was’. • ‘see how things were for grandparents’. • ‘gaining knowledge’.

-
- ‘escape current world’.
 - ‘it’s stimulating and interesting’.
 - ‘for the past way of life, for keeping our standards up’.
-

(15) Do you like antiques or vintage products? Do you collect/want to collect them?

The majority said they said they like antiques and vintages (80%, N = 46) but less than half collect them (42%) and a few want to collect them in future (27%). Those who do collect these items do not necessarily feel nostalgic about them (83.3%, N = 12).

Some of the desirable antiques/vintage items that people collect or wish to collect included books [n = 7]; furniture [n = 5]; jewellery [n = 3]; clothing [n = 4]; weapons (e.g., swords; daggers; knives) [n = 3]; artefacts (e.g., coins, stamps, statues, painted glass; lampshades, curios) [n = 6]; household items (e.g., children’s toys, washbasin, items of family significance, vessels) [n = 4]; instruments (e.g., clocks, pens, musical instruments) [n = 3]; cars; and art. Some said they like thinking of the stories behind these articles. Some said they like going to palaces, forts, museums and heritage sites that store these collectibles to see these but do not want to own them themselves.

2.3.8 Relationships between Different Aspects of Nostalgia, and Judgements about Past Eras

The results above show that nostalgia varies in terms of how it is understood, its objects and triggers, the experience itself, and its frequency. I also looked for significant associations between the different aspects of nostalgia and evaluative judgements about past eras, but only a few significant ($p < 0.05$) results were found. Mann-Whitney U Test analysis showed that those who get nostalgic about people were found to be more frequently nostalgic ($M = 1.79$, $SD = 0.522$) than those who did not ($M = 2.27$, $SD = 0.905$); $F(1, 49) = 5.072$, $p=0.029$. Being nostalgic about “time” was found to be associated with a wish to return to

schooldays; χ^2 (2, N = 47) = 6.248, $p < 0.05$, while being nostalgic about “place” was found to be related to whether one wishes to return to childhood; χ^2 (1, N = 50) = 4.177, $p < 0.05$, and whether one enjoys books about the past; χ^2 (1, N = 40) = 4.675, $p < 0.05$. Wishing to return to childhood was found to be associated with finding childhood to have been easier χ^2 (2, N = 48) = 12.120, $p < 0.05$, and with the frequency of nostalgia F (1, 49) = 7.376, $p = 0.009$, such that those who wished to go back to childhood were more frequently nostalgic ($M = 1.64$, $SD = 0.492$) than those who did not wish to return to it ($M = 2.11$, $SD = 0.685$). The above associations suggest that the content of the nostalgic experience and perceived complexity of past eras is relevant in determining the experiential nature of nostalgia in terms of motivation and frequency.

The small combined sample makes it difficult to conclude that where there is no significant association, the different components of nostalgia are completely unrelated. It is possible that small or moderate associations might exist.

Sometimes, the lack of association is revealing. For the majority of participants, when responses indicate that event recalled can be unhappy, the description of the nostalgic feeling is “mixed” (59.4%) and when the event recalled can only be happy, the description of feeling is “happy” (58.3%). However, for a reasonable minority, even when the event is unhappy the feeling is “happy” (40.6%) and when the recalled event is happy, the feeling is sometimes “mixed” (41.7%). It appears, then, that the affective nature of the event and the experience do not always correspond to each other. The study found no patterns for those who could become depressed by their nostalgic experiences. For example, such people were not significantly more or less likely to wish to relive events, or describe the event recalled and the nostalgic experience as “mixed”/“sad”.

2.4 Discussion

It is generally agreed that nostalgia contains both cognitive and affective components (Batcho, 1995; Werman, 1977) but otherwise there is little academic consensus. The

confusion about this phenomenon encompasses its whole realm, as there is no consensus on the constituents of the cognitive aspects, the valence of the affective state, and the causes and consequences of the phenomenon. This study looked at the affective and motivational nature in addition to the cognitive aspects of nostalgia. These were studied by looking at the components that form the structure of nostalgia, in terms of triggers, object (or content), affect, motivation, and frequency. Evaluative judgements about past eras were also studied—specifically childhood and schooldays from one’s personal past—and about historical eras before one’s birth that form potential objects of nostalgia.

As mentioned earlier, this study was an initial exploration of some unanswered questions about nostalgia. The small sample size of the study limits its power of generalisability. Nevertheless, it does provide future directions to pursue. Therefore, the findings of this study are discussed below in the context of the existing research and its implications for future directions.

2.4.1 Cognitive Components

Nostalgia was found to be a fairly regular experience among the participants; on a scale of “often-sometimes-rarely-never”, the average frequency within the sample was found to be “sometimes”. The participants reported nostalgia was most to be most likely triggered by “music” and “smell”; the object of the event is most likely to be “people” one has interacted with in the past. Being nostalgic about people was associated with more frequent nostalgic experiences. While the content, cause and triggers of nostalgia have had many theoretical discussions, only a handful of studies have looked directly into the question, and the results of the present study were similar to, but not totally congruent with them. Over two studies, Wildschut et al. (2006) found “momentous events” and “persons” to, alternatively, be the most popular object of nostalgia; and “negative affect”, to be the most potent trigger followed by “social interactions” and “sensory inputs” like “music and smell”. Holak and

Havlena (1992) found tangible stimuli like music and film to be important triggers, and descriptions of events and people to be the common content of nostalgia.

In addition to the above, this study also found that it is possible to get nostalgic about aspects of daily-routine tasks from the past and physical possessions like old phones, vehicles and toys. With respect to the triggers that elicit nostalgia, it was observed that not all triggers worked for everyone and some are likely to be more potent triggers in general, than others.

2.4.2 Affective Components

The emotional tone of nostalgia has been widely discussed and debated. A review of the literature shows that the understanding of the emotional tone of nostalgia has shifted from a clear ‘negative’ (Best & Nelson, 1985; Fodor, 1950; Peters, 1985) to a ‘positive’ or a combination of ‘positive’ and ‘negative’ emotions (Batcho, 1995; Holak and Havlena, 1998; Wildschut et al, 2006; Zhou et al, 2008). However, the verdict on the emotional nature of nostalgia is still out. In this study, the nostalgic experience was found to be equally likely to either contain only positive affect or a mixture of positive and negative affect, but not solely negative emotions.

Additionally, a majority of participants reported that the nostalgic experience could lead to a state of sadness, which could suggest that when nostalgia contains negative affect, it might be teetering on the edge and could easily lead to depression. New Zealanders were more likely to describe nostalgic affect as ‘happy’, while Germans and Indians were more likely to say it is ‘mixed’. Thus, there might be a cultural element in nostalgia, or at least in what people are willing to label as nostalgia.

The participants also reported that at times the affective tone of the nostalgic event was not necessarily happy or positive and it could also be a happy/neutral event from a troubled period of time in their life. The nostalgic experience could be positive even if the original event is not, which does suggest that nostalgia could often be adaptive, as has been

discussed in the literature (Sedikides et al., 2008; Wildschut et al., 2006). That is, it is possible that the resultant change in affective nature of the event experience is a consequence of re-evaluation of the event itself in terms of its significance (in the context of time elapsed or change in self-processes) or possibly because of a reappraisal of its “what” and “why”. It could also be the case that, even if the event recalled was not itself positive in nature, the general time-period during which the event occurred or other factors (e.g., people or place) associated with the event elicit positive affect, and the change in the affective nature is a result of affect transference. This is indicated by the finding that it is possible to be nostalgic about happy or neutral events from a generally troubled period of time in one’s life.

The above reasoning assumes that the affective nature of the nostalgic feeling is similar to the affective nature of the event recalled. It is also possible that the affective nature of nostalgic experience is dependent on the affective state one is currently in and the affective nature of event is irrelevant, or at least less potent at times, in determining the affect of the experience. That is, if one is being nostalgic when (or because one is) not in a positive affective state in the present, the affective nature of the nostalgic event recalled might be overpowered by that of the current state. This might be at play in those cases where the event recalled is of positive affective nature but the nostalgic experience is mixed.

The findings of this study indicate that the affective nature of the nostalgic event also needs to be considered in studying nostalgia as the event can *often* not be a purely positive one, or might be a positively-toned event that originates from a time-period when someone might have experienced frequent negative affect. These types of events might also play a role in determining the affective nature of the experience and make it more bittersweet.

2.4.3 Motivational Components

Nostalgia by definition has a yearning or longing component (Hofer, 1988; Oxford English Dictionary, 2018). The negative affect and maladaptive nature which had been attributed to nostalgia was consequent on this yearning component. The yearning to return to

a past would inevitably lead to goal frustration, which then would cause a negative affective state and therefore would be maladaptive. However, over the years nostalgia has transformed into a more positive phenomenon and is considered to be rather adaptive, which gives rise to the need to take a look at the yearning component, or the “motivational nature” of nostalgia.

Participants in this study rarely showed a pure motivation to go back to the past, and less than half the sample showed any motivation to go back. The nostalgic experience was rather more likely to show a motivation to relive the past in mind which was at times accompanied by a motivation to return to the past, but more often was accompanied by a wish to re-experience similar events in the future. This might be because actually going backward in time is not possible, and a wish to do so leads to frustration, but a wish to “relive in mind” does not lead to goal frustration but instead to proactive and purposive planning. The motivation to experience similar events in future was particularly prevalent in the younger people in the sample, for whom there was likely to be more opportunity to do so.

Thus, the perplexity over the adaptive or maladaptive nature of nostalgia could possibly be resolved by considering its motivational nature, and whether it is accompanied by a yearning to go back in time or repeat the experience in the future rather than simply reliving the experience in the present. That is, the nature of nostalgic motivation might vary from person to person. A pure motivation of returning to the past might exist in a small sample of individuals and this would be indicative of maladaptive nostalgia. The observed association between evaluative judgements of past eras, motivation to return to it and frequency of nostalgic experience, provides further evidence that, for a minority, the nostalgic experience might be maladaptive and might result from perceiving the past as less complex than the present. However, for the majority, the motivation of nostalgia might be only to re-experience the past, without actually returning to it, either mentally in the present or physically in the future, by recreating those events. This form of nostalgia could be indicative of it being adaptive.

This study indicates that the motivational nature of nostalgia is relevant to the experience, and could reveal more about the premise of nostalgia. This aspect of nostalgia, thus, requires a further examination.

2.4.4 Nostalgia and Past Era

This study also found that the people in the sample mostly did not wish to return to past eras, but did enjoy thinking about them. The participants did think about their schooldays; they found childhood to have been simpler and sometimes better but not necessarily easier. Participants also liked to learn about historical eras from media and experience them through physical relics from those eras; but did not really wish to go back in time to these personal or historical eras and experience them in real time.

However, there were exceptions, a few did wish to return to childhood (especially those who found childhood to have been easier) and the non-academic aspects of schooldays; and a handful got nostalgic about past eras and thought the past was better. Finding childhood easier was also associated with more frequent nostalgic experiences. Some of the reasons for considering past eras to have been better were due to a lesser influence of technology over daily life, better quality of life and interpersonal relations, an appreciation for the past culture and opportunities for the pursuit of knowledge.

Thus, for a minority of the participants the psychoanalytic viewpoint held true that nostalgia is a form of regression where one wishes to go back to childhood as a result of finding it to be easier than adulthood (Lowenthal, 1975) but the majority did not hold a more favourable view of the past as compared to the present, and did not wish to go back to it when they were experiencing nostalgia. So, while the past eras of our own lives and historical ones before us can be appreciated and evaluated as simpler and better in some ways, the appreciation does not necessarily lead to nostalgia, and feeling nostalgic about these eras is not necessarily accompanied by a wish to return to it. This adds to the work of Batcho (1995, 1998) who found that more nostalgic people favour the past more, but do not differ from less

nostalgic people on their evaluation of the present, and therefore concluded that nostalgia is caused by an admiration of the past.

This further indicates that the motivational nature of nostalgia is more complex than a simple wish to return to a past because it is considered to be a simpler, less complex and better time in life.

2.4.5 Demographics

Nationality was found to be relevant to description of affect for nostalgic experience, New Zealanders were found to be more likely to evaluate the nostalgic experience in a positive light, than the other nationalities. Indians and Germans were found to be more likely to be nostalgic about past eras of other cultures. Age and gender was relevant only for the description of motivation. Younger people were more likely to plan for similar future experiences when nostalgic than the older group, and females were more likely to show motivation to return to the past than males.

2.5 Limitations, Conclusion and Future Direction

The size of the sample puts limitations on the conclusions that can be drawn and any attempt to generalize the findings to the wider population, particularly concerning the relationships between different aspects of nostalgia. Additionally, not all participants answered all of the questions, which resulted in different sample sizes for some of the analyses.

Nonetheless, the research does provide a number of useful leads for further pursuit and the results obtained so far give some indication as to why nostalgia has proved a difficult subject to research. The phenomenon of nostalgia does not seem to be a constant and invariable one. It was found to differ in terms of affect, motivation and content with some covariation of the different aspects. The ‘yearning’ component of nostalgia, which is a defining feature of the phenomenon, needs further investigation to help comprehend its real

meaning, i.e., whether the yearning is directed toward a real experience in the physical realm or is only limited to mental imagery in the cognitive realm.

Study 1, thus, helped delineate some of the components of nostalgia through a survey on people's experiences and ideas on nostalgia. Participants in the survey generally agreed that nostalgia has to do with memories of the past, but this did not necessarily have to be one's own memories and it is possible to be nostalgic about a historical past that one has not lived through. The meaning of nostalgia also showed slight differences between cultures. No clear consensus was found on the affective tone and motivational intention in nostalgia. Some responses characterised nostalgia as positively toned and others characterised it as a mixed-tone (both positive and negative) but no one stated that it was purely of a negative tone. The motivational intent in nostalgia was not often characterised by a wish to go back to the past and mostly comprised a wish to relive the experience in mind. The object of a nostalgic experience was mostly 'people' from ones past, and music was found to be the most potent trigger of nostalgia. However, there appeared to be a lot of variability in these responses, especially in that of the motivational and affective aspects of the nostalgic experience.

These variations are likely to be a result of individual-difference factors, situational factors that lead to the trigger of nostalgia in the first place, as well as an interactive effect of the two. These concepts are further explored in Study 2 by observing nostalgia as it operates, and examining how state and trait nostalgia varies with individual-difference factors.

3 Chapter 3: Study 2—Experimental Design for Observation of the Operational Process of State Nostalgia and the Experiential Nature of State and Trait Nostalgia

The existing psychological literature studied state and trait nostalgia mainly to observe the postulated effects and benefits of nostalgic experiences and nostalgia-proneness, and the factors that play a role in these. While the components and contents of nostalgia were widely discussed in the literature (e.g., Baker & Kennedy, 1994; Davis, 1979; Goulding, 2001; Havlena & Holak, 1996; Stern, 1992a), only a handful of studies (e.g., Havlena & Holak, 1991; Holak & Havlena 1992; Wildschut et al., 2006) observed the contents of the nostalgic memory (i.e., object of nostalgia) and none studied the interactions of the different components of nostalgia. An important question in nostalgia is whether it is beneficial or harmful, with recent studies finding evidence mostly for its advantages but at times also finding it to be detrimental. The same theme is observed in terms of its affective valence.

For a concept that has undergone a complete transformation in meaning in the past couple of decades, not much research has looked into what it constitutes of. As was observed in Study 1, the different components of nostalgia can be varied in nature, and it might not be a constant, invariable phenomenon. That is, unlike an emotion, say happiness, which is likely to be elicited by stimuli of similar nature (a positive or beneficial one), which is experienced as a particular affective state that varies only in magnitude, and a motivational state that is possibly characterised by a wish to go towards the stimuli (i.e., approach motivation), nostalgia might be elicited by both positive or negative stimuli and might be experienced as a positive or negative affective state, and be characterised by motivational natures of varying forms. Furthermore, these differences might result from both situational and individual-difference factors. This complex cognitive and affective nature of nostalgia is mentioned in discussions of nostalgia in the literature, both in written postulations of what nostalgia is and in discussions of empirical studies on nostalgia's factors and benefits, when these have found confusing results. Additionally, even emotions are considered to be dynamic processes in

terms of their temporal progress, i.e., they change and evolve over time, (Davidson, 1998; Frijda, 2007; Verduyn et al., 2013), and this dynamic nature of emotions is considered to be important to obtain a full account of emotions and their characteristics (e.g., Davidson, 1998; Eaton & Funder, 2001; Larsen et al., 2003, 2009; Scherer, 2009; Schimmack et al., 2000; Verduyn et al., 2013). This argument also seems to be relevant for the phenomenon of nostalgia, which appears to be dynamic in terms of both time and structure.

Thus, there seems to be a need to observe the phenomenon of nostalgia in terms of its different components while it operates. Therefore, this study undertook an examination of the operational process of state nostalgia in terms of its cognitive, affective and motivational components. In addition, the affective and motivational natures of trait nostalgia and the influence of other pertinent trait factors were also studied. This study also observed some cognitive parameters of the nostalgic process to study its relation to general autobiographical memory processes.

The nostalgic operational process starts with a *trigger* (stimuli) that elicits the recall of an *event*, which then leads to an *experience* that involves a mental simulation, an affective state and a motivational intent. From Study 1, possible motivational intents of nostalgia were found to be a ‘wish to go back to the past’, ‘relive the event in mind’ and a ‘wish to recreate the event in the future’. According to the literature and as observed in Study 1, some possible triggers of nostalgia are music, smell, images, negative affect, existential concerns, etc. These could be classified into two categories—a direct stimulus (e.g., music, smell, photographs, etc.) and an indirect stimulus (e.g., negative affect, existential concerns, instructions to feel nostalgic, etc.). The term ‘direct stimulus’ here refers to the fact that the stimulus (e.g., music) is directly associated with an encoded memory. Similarly, the term ‘indirect stimulus’ refers to the fact that the stimulus is not directly associated to an encoded memory. Following this reasoning, a nostalgic experience elicited by asking a participant to feel nostalgic in a

laboratory setting can be considered to be an indirect stimulus and an experience elicited by playing music could be considered to be a direct stimulus.

The different parts of the operational process described here are schematically represented below (Figure 3.1). In the figure, time is represented at the bottom with an arrow indicating the direction of passage of time. On the left side is the past, where the event at the core of the nostalgic memory originates, from among a memory pool for nostalgia. On the right side is the present, where first a direct or indirect stimulus acts as the trigger that starts the process of memory elicitation, which then leads to the experience in the present.

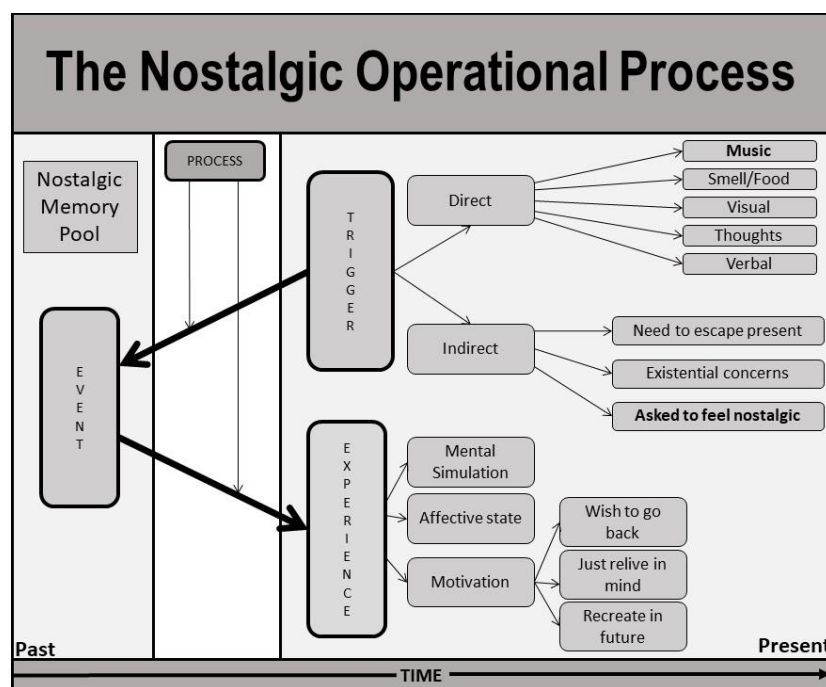


Figure 3.1. The Operational Process of Nostalgia.

In the figure above, the terms ‘music’ and ‘instructions to feel nostalgic’ under direct and indirect triggers, respectively, are in bold as these two types of triggers were used in this study to elicit state nostalgia. After an experimental manipulation of the trigger, the cognitive, affective and motivational aspects of the phenomenon were observed. In addition, measures of trait nostalgia and individual-difference factors were also taken.

The cognitive aspects examined in the study were the contents of the memory itself (i.e., event characteristics), parameters of the cognitive process (e.g., response time and

duration) and the phenomenology of the memory recall (in terms of vividness). The affective nature was observed in terms of the affect valence of both the event and the experience. The motivational nature was observed in terms of a wish to go back to the event recalled in state nostalgia and trait nostalgic motivations of wishing to go back, wishing to relive the event in mind and wishing to experience similar events in future. The individual-difference factors examined were age, gender, nostalgia-proneness (trait nostalgia), life satisfaction, place of living and culture. Therefore, the objective of this study was to observe these components of the phenomenon of nostalgia and observe *if* and *how* it differs with (i) the situational factors (trigger that elicits nostalgia) and (ii) the individual that experiences nostalgia (trait factors).

The following section in this chapter discusses the research questions and hypotheses in the context of the existing literature. Relevant literature on autobiographical memory is also discussed here. Following which the methodology for the study is described. The study results for the experimental manipulation of trigger is discussed in Chapter 4. The influence of individual difference (trait) factors on state and trait nostalgia was assessed only for the indirect stimulus condition. These are discussed in Chapter 5.

For ease of representation, from here on until the final section on research implications in Chapter 6 (Section 6.1), the cognitive aspects are split into two sections—the process parameters (pertaining to the ‘process’ box in Figure 3.1) and the event characteristics (pertaining to the ‘event’ box in Figure 3.1). The phenomenology, and the affective and motivational natures are discussed under a section on experiential nature (each pertaining to the sub-parts of the ‘experience’ box in Figure 3.1).

3.1 Research Questions

3.1.1 The Process Parameters

Emotions are considered to be time-dynamic processes that are also lawful phenomena, i.e., their nature changes over time but there are rules and commonalities

underlying their functioning (Davidson, 1998; Frijda, 1998, 2007; Verduyn et al., 2013, 2015). In psychological studies of emotions and other affective and cognitive states, these rules are established by studying the situations that elicit the emotion or the affect and observing variations in certain parameters of the process, like duration, intensity, variation and onset of experience, as a result of the situation that gives rise to the emotion/affect. The scientific literature on nostalgia does not yet provide any evidence for the above-mentioned parameters. Thus, one objective of this study was to establish estimates of these process parameters of state nostalgia, and to *observe variations* in these parameters *as a result of the stimulus* that elicits it. An understanding of these parameter variations would help examine and establish the temporally and structurally dynamic nature of nostalgia.

3.1.1.1 Response Time

The literature on response time for memory recalled by different cue words shows that response times are shorter for memories recalled by ‘object’ words (e.g., book, flower, car) and ‘activity’ (e.g., run, work, sing) words, as compared to ‘emotion’ or ‘affect’ (e.g., happy, lonely, angry) words. This is attributed to the fact that emotions and affect might pertain to a wider range of events, and therefore, an emotion cue word results in a longer search time for a particular memory, as compared to object and activity cue words which would likely be more directly connected to specific events.

In nostalgia, experiences elicited by a direct external stimulus (e.g., music) in the environment can be expected to have a faster onset than one elicited ‘internally’ by the individual, for example, by simply asking someone to recall a nostalgic experience. This is because in the case of the former, a potential stimulus can be expected to be directly associated with a memory and thus lead to a faster recall of a memory, while in the case of the latter, one would need to ‘search’ for a memory that makes one feel nostalgic.

3.1.1.2 Duration of Experience

Studies on emotional experiences show that emotional episodes can range from a few seconds to several hours or longer (Fitness & Fletcher, 1993; Scherer et al., 1986; Sonnemans, 1991; Verduyn et al., 2009a) and the duration of the emotional episodes varies with certain trait, episodic and momentary factors (Verduyn et al., 2011). Here, trait factors refer to individual-difference factors, episode factors refer to factors that are constant within episodes but can vary between episodes (e.g., importance of the stimulus and intensity of emotion at onset) and moment factors refer to factors that might vary within an episode (e.g., reappearances of the eliciting stimulus, which is not necessarily physical and can also be a mental reimagining of the stimulus) (Schimmack, 2003; Sonnemans & Frijda, 1995; Verduyn et al., 2009a, 2011).

The duration of the nostalgic experience is expected to differ with its trigger, specifically with the presence and absence of an eliciting stimulus during the experience. That is, a physical stimulus that is present in the environment while a nostalgic experience occurs, should be able to elicit a longer experience as it would provide sensory stimulation during the course of the experience. Therefore, it was expected that nostalgic experiences elicited by music would last longer than that elicited by the instructions. The study also provides an understanding of average durations of nostalgic experiences.

3.1.1.3 Intensity and Variation

Intensity profiles of emotions show that emotions usually temporally vary in terms of steepness at onset, skewness and number of peaks (Verduyn et al., 2009). An intensity process function for the nostalgic function in terms of its intensity would help in understanding how the average nostalgic experience varies temporally. It was expected that the nostalgic experiences would be more intense and varied when elicited by a direct (music) stimulus, as the presence of a stimulus at onset and during an emotional experience is found to result in

greater intensity and more peaks in the intensity curve, i.e., greater variation in intensity (Verduyn et al., 2009, 2011).

3.1.1.4 Age at Event—Search for a Nostalgia Bump

In lifespan retrieval curves for autobiographical memory, a phenomenon called the ‘reminiscence bump’ is often observed (Rubin, 1986; Rubin & Schulkind, 1997; Janssen et al., 2005), which involves a higher rate of recall of memories from adolescence and young adulthood (10–30 years) in adult populations over 40 years of age. Different explanations have been given to explain this bump in recall. Research on this phenomenon suggest that it occurs due to a stronger encoding of the events that occur in adolescence and as a consequence of this stronger encoding, these events are retrieved more frequently later on in life (Rubin, 1986; Janssen et al., 2005).

Study 2 aimed to observe if there is a nostalgic-bump similar to the reminiscence-bump associated with the autobiographical memory recall. The literature on nostalgia does not provide evidence for which time-point in one’s life nostalgic memories originate from. However, some discussions suggest that it would pertain to childhood (e.g., Dickinson & Erben, 2004; Kleiner, 1970; McGriff, 1997), some posit that it would pertain to adolescence and early adulthood (Davis, 1979; Holbrook & Schindler, 1989; Schuman & Scott, 1989), and others have suggested that it would not pertain to any particular time-period (Köneke, 2011). Therefore, it would also be of interest to observe if the target event for nostalgia originates from a common past time-period of life, across individuals.

3.1.1.5 Age of Memory

Studies on autobiographical memory organisation have looked at different characteristics of memories, like context and actions (Schank, 1982), hierarchical structure of events (Conway & Pleydell-Pearce, 2000; Kemp et al., 2009; Robinson, 1976; Resier, et al. 1985; Rubin, 2005) and temporal characteristics of event organisation (Burt, 1992; Burt et al.,

2000; Conway & Bekerian, 1987; Robinson, 1976). Studies of the temporal organisation of memory have examined the age of the memory (Conway & Bekerian, 1987; Robinson, 1976), biases and errors in remembered dates (Baddeley, 1989; Bradburn et al., 1987; Burt, 1992; Kemp, 1994, 1998; Rubin and Friedman, 1993), sequence and ordering of events (Burt et al., 1998; Burt et al., 2000; Newton, 1976) and so on. The age of memory seems relevant for the study of nostalgia.

Age of memory refers to the temporal distance between the event and its recall (here, the recall is the nostalgic experience), i.e., how long ago the recalled memory had occurred (Robinson, 1976). An oft stated explanation for the cause of nostalgia is the discontinuity hypothesis (Batcho, 1995; Davis, 1979; Sedikides et al., 2008), i.e., nostalgia is a result of a perceived discontinuity between past and present. A common epigram for nostalgia is “the good old days”, which suggests that memories that elicit nostalgia have to be ‘old’ or distant from the present to an extent. Thus, it would worth observing how far in the past an event must be to be considered disparate enough from the present, to be capable of eliciting nostalgia, and whether it also requires a life-stage transition. That is, whether nostalgia requires one to move to a different phase of life to feel nostalgic about a past phase.

3.1.2 Event Characteristics

3.1.2.1 Event Type

The hierarchical organisation of autobiographical memory (Conway, 1990, 1992, 1996; Conway & Pleydell-Pearce, 2000; Kemp et al., 2009) delineates a functional model of autobiographical memories, which acts through a working self-system that interacts at four levels (theme, lifetime, periods, events and episodes) ranging from the abstract (or thematic) to the specific. A theme is an abstract form of autobiographical memory that describes one’s life story, e.g., leisure, work, etc., while an event is a highly specific experience, which can be unique, or even extended and repeated, e.g., a particular dinner with a particular friend, a

trip to Europe, watching movies with flatmates on weekends, etc. (Burt et al., 2003; Conway, 2005; Kemp et al., 2009).

Are memories recalled during a nostalgic experience specific and at an event level or abstract and at a thematic level? Experiences pertaining to specific events would have a different implication than those pertaining to abstract themes, as in the absence of specificity of events, the recall would contain fewer details and would, thus, be more focussed on the feelings (both those experienced during recall and those pertaining to the object of the theme) of the experiencer.

The nostalgic event was expected to be more thematic in nature in the indirect stimulus condition and more specific in the direct stimulus condition, as a direct stimulus is likely to be associated with more specific memories.

3.1.2.2 Event Contents

Previous research has established that the self and people are prominent objects in nostalgic memories (Holak & Havlena, 1992; Wildschut et al., 2006). In addition to the object of nostalgia, it would be of interest to see what the contents of the nostalgic memories look like in terms of who, what and where (i.e., event characters, activity and location, respectively) to see if there is a common underlying theme that makes an average nostalgic experience. If the events in this nostalgic pool have a common theme among them, this would imply that there is a criterion for nostalgic memories and would suggest that the central focus in nostalgia is a certain type of event. In addition to the event contents, the affective tone of the event itself (i.e., affective tone of the event when it was taking place in the past) is also relevant, as it appears that nostalgia can also pertain to unhappy events, or events from a troublesome, unhappy time-period of one's past. Thus, it would be worth noting if and when nostalgia pertains to an unhappy event, what the event itself comprises and what the resultant affective and motivational nature of such a nostalgic experience looks like.

It is expected that the event contents would be characteristically different between the two experimental conditions, however, the direction of these differences is not known and the study aimed to explore this question.

3.1.3 Experiential Nature

3.1.3.1 Phenomenology

Nostalgia is characterised by a pronounced reliving component that can alter one's current physical state of being (Peters, 1985; Zhou et al., 2012). Reliving and belief have been shown to be basic, defining features of autobiographical memory recall, and they constitute its phenomenological experience (Baddeley, 1992; Brewer, 1996; Rubin, 1998; Rubin et al., 2003b). Belief in memory recollection is derived from contextual information about the recalled event (Johnson et al., 1998; Rubin et al., 2003c) and the most important form of context is provided by visual imagery (Brewer, 1996; Rubin, 1998). Visual imagery involves descriptive, object imagery and spatial imagery (Farah et al., 1998; Rubin, 1995a; Rubin et al., 2003c); also relevant here is a component of visual perspective (Nigro & Neisser, 1983; Rubin et al., 2003c). In addition to the visual information, other components that play a role in the phenomenology of memory include an auditory imagery (Heuer & Reisberg, 1992), a linguistic (Rubin et al., 2003) and affective component (Rubin et al., 2003b), and a narrative flow (Rubin, 1995b, 1998; Rubin et al., 2003b).

The above-mentioned aspects of phenomenology were used to make up a measure of phenomenology in a questionnaire devised by Rubin, Schrauf and Greenberg (1999); from here on in this thesis, this questionnaire is referred to as 'Rubin's scale'. An enquiry into the phenomenological nature of nostalgic recall in terms of its sensory and recollection components, as per Rubin's scale, would provide an empirical basis for the relative importance of each feature in the context of nostalgic recall, and could also be used to compare nostalgic with general autobiographical recall. It was expected that nostalgic recall

elicited by a direct physical stimulus (music, in this study) would lead to higher ratings of the phenomenological experience, as the presence of stimuli that were available at encoding are found to lead to better recall.

3.1.3.2 Affect

As discussed in the literature review, the affective nature of nostalgia has been heavily debated (e.g., Barrett et al., 2010; Batcho, 1995; Cavanaugh, 1989; Holak & Havlena, 1992; Johnson-Laird & Oatley, 1989; Kleiner, 1970; Köneke, 2011; Ross, 1991; Werman, 1977; Wildschut et al., 2006). While the positive tone of nostalgia prevails in recent literature, there is no unanimous agreement and the bittersweetness of nostalgia is also accepted to be a characteristic feature of nostalgia. Therefore, a measure of the prevalence of the different affective tones (positive, negative, or mixed) of nostalgia and the factors that contribute to each affective tone would help shed light on this confusing aspect of nostalgia. This was studied at both the state and trait level in this study.

In addition to the affective tone, the emotions and feelings (affection, gratitude, achievement, sense of loss, and feeling of life being meaningful) that compose the nostalgic experience also deserve a look. Nostalgia is said to contain in it feelings of gratitude and affection for the past (Wildschut et al., 2006), is correlated with achievement needs (Batcho, 1998; Köneke, 2011), is associated with a meaning-making function (Routledge et al., 2008), and at times contains a sense of loss (Kleiner, 1970; Lowenthal, 1975). Therefore, the emotions in nostalgia was also explored in this study to see to what extent nostalgia includes these emotions and how they contribute to the nostalgic experience.

3.1.3.3 Motivation

As mentioned in the research objectives, one of the main questions to be addressed in this study is the yearning component (motivational nature) of nostalgic experiences.

Nostalgia is thought to be characterised by a feeling of longing (Davis, 1979; Sedikides et al.,

2008). A longing for an unattainable goal (be it the past or the homeland) would appear to be a sign of dysfunction, which has led to medical professionals (Hofer, 1688; McCann, 1941; Rosen, 1975) and psychoanalysts (Beisser, 1987; Fisher, 1991; Fodor, 1950; Kleiner, 1970; Kulish, 1989) to characterise nostalgia as maladaptive. However, this stands at odds with the current view of nostalgia as a beneficial coping mechanism (Routledge et al., 2008; Sedikides et al., 2008; Wildschut, 2006) that has an important psychological function of meaning-making. Therefore, an understanding of the motivational intent underlying the longing or yearning component of nostalgia seems to be called for and would help make sense of this conundrum.

Whether nostalgic experiences are characterised by a wish to return to the event was studied at the *state level* in this study. Following Study 1, it appears that the nostalgic experience is often described as ‘missing the past’ or ‘missing those times’ but this feature does not always imply a wish to return to the past. Some descriptions of the nostalgic experience, in Study 1, were found to involve a wish to simply relive the event in mind and not return to it and others involved a wish to momentarily go back to the past and relive it or view it like one is watching one’s life play on television. The nostalgic experience was also found to include a wish to recreate similar events in future. These aspects of the *trait level* nostalgic motivational nature were also examined in Study 2. In addition, emotion and feelings in nostalgia that serve an existential function, as discussed in the existing literature (Routledge et al., 2008; Wildschut et al., 2006) were also explored at the trait nostalgic experiential level.

The above sections describe the different components of nostalgia that Study 2 investigated to determine its cognitive, affective and motivational nature. Along with the interrelations of the different components, the study also looked at situational and individual-difference factors that influence nostalgia. These are discussed below.

3.1.4 Situational and Individual Factors

3.1.4.1 Trigger for Nostalgia (Stimulus)

The experience of nostalgia begins with either an external physical stimulus or due to an internal state within the individual. The laws of emotion state that “emotions arise in response to the meaning structures of given situations; different emotions arise in response to different meaning structures” (Frijda, 1988, p. 349), which implies that an emotion like grief is elicited by loss and one like happiness is elicited by something beneficial to the individual. Nostalgia, an affective state that contains a complex mixture of emotions and cognitions should be subject to similar laws. That is, nostalgia elicited by an external stimulus possibly entails a different meaning structure than one elicited by an internal need, which in turn possibly leads to different emotions comprising the nostalgic experience.

Study 2 investigated if nostalgia differs with the trigger that elicits it and how. A direct, music stimulus and an indirect stimulus in the form of instructions were used to trigger nostalgia. It would also be worth observing if nostalgia pertains to a specific time-period of life or if it differs with the life stage that it pertains to. To this end, music that might pertain to one’s childhood and to one’s teenage years were used to elicit nostalgia.

The influence of the trigger on the different parameters of measure in this study has already been discussed in the sections above. The individual-difference factors studied and their expected influence on the different components of nostalgia are discussed below.

3.1.4.2 Age of the Participant

The age of the individual experiencing nostalgia is thought to be a factor in nostalgia (Davis, 1979; Holak and Havlena, 1992; Köneke, 2011) but the evidence is confusing (e.g., Batcho, 1995; Goulding, 2002; Holbrook, 1993). Thus, the influence of age on state and trait nostalgia were observed to see if it is a relevant factor.

Age was expected to be positively correlated with duration and intensity of experience. It was expected that older people will have a longer and more intense nostalgic

experience, as the meaning-making function of nostalgia was expected to play an important role in older individuals (Köneke, 2011), and thus, both state and trait nostalgia were expected to be of greater significance in their lives. Older people were expected to show a longer response time and think of more thematic events as they should have a larger repository of memories to choose from, and consequently more abstract representations of memories. They were also expected to have more constant, stable experiences that are less varied, as older individuals generally show greater emotional intelligence (Fernández-Berrocal et al., 2012). The nostalgic experience was expected to involve a greater degree of motivation to return to the past and show more mixed affect with increasing age.

3.1.4.3 Gender

Past research on nostalgia suggests that gender influences the meaning (Davis, 1979; Greene, 1991) and content of nostalgia (Baker & Kennedy 1994; Havlena & Holak, 1991; Sherman & Newman 1977), and might also influence its frequency (Batcho et al. 2008; Holbrook, 1993). In Study 1, gender influenced the motivational nature of nostalgic experiences, where women showed a greater motivation to return to the past. Thus, it was expected that there would be a significant influence of gender on the nostalgic experience in terms of the event characteristics, motivational nature and trait nostalgia, where women were expected to be more nostalgic-prone and show a greater motivation to return to the past than men.

3.1.4.4 Culture

Cultural differences in nostalgia have been hypothesized in the literature, especially in terms of the interpretation of the affective tone of nostalgia (Dickinson & Erben, 2006; Johnson-Laird & Oatley, 1989; Kemper, 1987; Köneke, 2011). Some evidence for this was found in Study 1, with the New Zealanders in the sample more likely to think nostalgia is positive and the Indians and the Germans in the sample more likely to think that nostalgic

affect was of mixed tone. Therefore, in this study, a cultural comparison between New Zealand and India was obtained. It was expected that there would be significant differences in both state and trait nostalgia experienced by a New Zealand and an Indian sample, where the former was expected to show more positive affect nostalgia and the latter expected to show more mixed affect nostalgia. It was expected that there would be other differences but the directions of these differences were not hypothesised.

3.1.4.5 Place of Living

Given that the roots of the concept of nostalgia lie in a wish to return to one's homeland (Hofer, 1688), it would be of interest to see whether one's current place of living plays any role in nostalgia as it is understood today. Therefore, in this study, whether or not participants were residing in their hometown and in their home-country was included as a factor. It was expected that an individual who was not residing in their hometown/home-country would be more likely to recall events that took place in their hometown than individuals who were currently residing in their hometown/home-country. The nostalgic experience of individuals who were not residing in their hometown/home-country was expected to be of more mixed affect and show more of a motivation for similar future experiences.

3.1.4.6 Trait Nostalgia (Nostalgia-Proneness)

It stood to reason that nostalgia-proneness would influence the state nostalgic experiences and the characteristics of the events recalled, and affective and motivational natures of trait nostalgia.

Nostalgia-proneness was expected to be negatively correlated with response time, and to be positively correlated with the duration, intensity and variation of the experience, as the more nostalgically prone find nostalgia to have a greater significance in their lives and have more frequent nostalgic experiences. The nostalgic experience was expected to involve a

greater degree of motivation to return to the past and show more mixed affect with increasing nostalgia-proneness. The characteristics of the recalled event were expected to differ with trait nostalgia but it was hard to know what the direction of these differences would be in advance.

3.1.4.7 Life Satisfaction

Negative affect can be a potent trigger of nostalgia (Wildschut et al., 2006) and some of the benefits of nostalgia are associated with reducing negative affective states like loneliness and worry (Zhou et al., 2008). Consequently, nostalgia has been found to be associated with life satisfaction. However, while some studies have found a negative correlation between nostalgia and life satisfaction (Köneke, 2011), others have failed to find any association at all (Batcho, 1998; Routledge et al., 2008). Therefore, life satisfaction was explored as a factor of nostalgia in this study.

Life satisfaction was expected to be positively correlated with response time, and to be negatively correlated with the duration, intensity and variation in experience. The nostalgic experience was also expected to involve a lesser degree of motivation to return to the past and show more positive affect with increasing life satisfaction. The nostalgic event was expected to be more thematic in nature for lower life satisfaction levels than for higher satisfaction levels, as those less satisfied with life are likely to focus on good times from the past when nostalgic, thus, they might be nostalgic about whole time-periods from the past when they were happier with life.

3.2 Methodology for Study 2

The experimental methodology for Study 2 is described in this section. After a description of the **research design**, a brief **overview** of the experimental procedure is given and outlined with the help of a schematic representation. A brief description of a novel apparatus and method that was used in this study to get a real-time (i.e., during the course of

the experience itself) report of the intensity of the nostalgia is also presented here. Next, the **variables** and **materials** used are described together, followed by a detailed description of the **procedure** and instructions given to participants. This study was approved by the Human Ethics Committee of the University of Canterbury, New Zealand (HEC 2016/100).

3.2.1 Design

A multifactor, multilevel between-subjects experimental design was used in this study. Subjects were randomly assigned to one of two experimental conditions—indirect stimulus condition, where nostalgia was induced through instructions or the direct stimulus condition, where nostalgia was induced through music.

The research design was a compound of a true experimental design and a correlational research design. The first part of study involved an experimental manipulation of the stimulus and observing the effect of this manipulation on the dependent variables. This part used a true experimental design and the results are discussed in Chapter 4. In the second part of the study, after the experimental manipulation and the dependent variable measures were observed, trait variable measures were taken. The associations of these trait variables with the components of the state nostalgic process by the indirect stimulus (instruction to feel nostalgic) and the associations with trait nostalgic experiential natures were also assessed, and these results are discussed in Chapter 5.

While the trait variables were included in the analyses because they were expected to have an influence on nostalgia, the random assignment in the experimental design should account for differences in response due to the influence of these trait factors. That is, the analyses of state nostalgia should not be confounded by the trait factors.

Overview of the Experimental Procedure

Step 1. The study started with each participant reading the Information Sheet and signing the Consent Form. After this, participants were instructed on the use of the apparatus (described in Section 3.2.2 under ‘Process Parameters Obtained from the Slider’) through

which a measure of the intensity of nostalgia was obtained in real-time, i.e., while the participant was having the nostalgic experience.

Step 2. Then, the participants were seated in front of a computer, where the *trigger* (described in Section 3.2.2 under ‘Experimental Independent Variables’) was presented on-screen and through headphones, and the participants used the apparatus as instructed. In this step, measures of the cognitive *process parameters* that were obtained from the Slider were recorded. These variables and their measures are described in Section 3.2.2 under the sub-heading ‘Process Parameters Obtained from the Slider’

Step 3. Next, the participants *described* the event recalled to the experimenter. In this step, the rest of the measures of the *process parameters* that were obtained from verbal reports, the *event characteristics* and the state *experiential nature* (phenomenology, affect and motivation) were recorded. These variables and their measures are described in Section 3.2.2 under the sub-headings ‘Process Parameters Obtained from Verbal Reports’ and ‘Event Characteristics’.

Step 4. Finally, the participants then *filled out* questionnaires through which the measures of the trait factors, i.e., trait *experiential nature* of nostalgia and the individual-difference factors, were recorded. These variables and their measures are described in Section 3.2.2. The trait experiential nature of nostalgia composed a major part of the dependent variables examined in this study and are described under the sub-heading ‘Experiential Nature’ in ‘Dependent Variables’. The individual-difference factors were independent variables in this study and are described under the sub-heading ‘Individual-Difference Independent Variables’ in the following section.

The figure below provides a pictorial representation of the experimental procedure. The top line of boxes in the figure represent the main constructs that were measured at different steps of the experimental procedure.

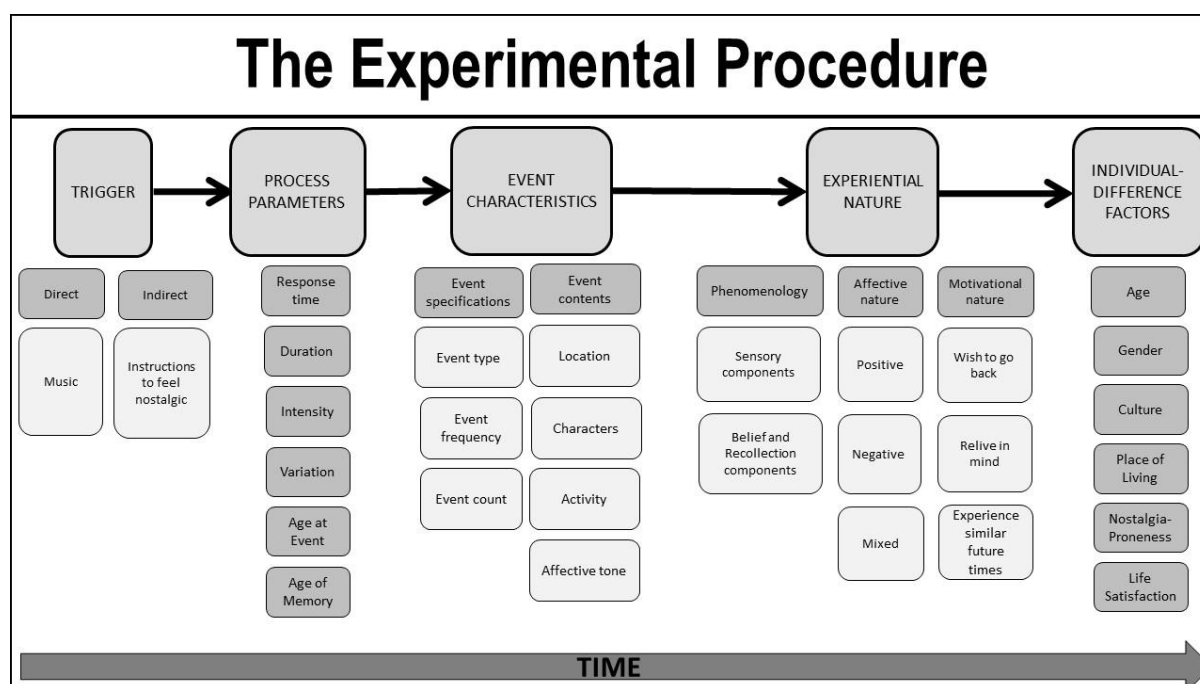


Figure 3.2. The Timeline for the Experimental Procedure and the Construct and Variables Measured in Each Step of the Procedure.

In the next section, the variables are defined and their materials and measures are described. Following this, the procedures and instructions are described in detail.

3.2.2 Variables and Materials

The variables observed, their levels and measures, are enumerated below. To maintain the flow of logic and for ease of comprehension, the materials used to measure each variable are described simultaneously. The relevant scales, items and photograph of apparatus are also provided here.

3.2.2.1 Independent Variables

The Independent Variables (IVs) and their levels were as follows.

3.2.2.1.1 Experimental Independent Variables

There was only one experimentally manipulated independent variable in Study 2. This was the stimulus or trigger through which nostalgia was elicited. The variable included two levels—indirect and direct. The indirect stimulus was a simple instruction. The direct stimulus was pertinent music.

The E-Prime software was used to present the instructions to the subject and to record the ‘start’ and ‘end’ time-points for the nostalgic experience. In the indirect condition, the stimulus used to elicit the nostalgic experience was verbal instructions that were visually presented on the screen. The presented stimulus asked the participants to “Feel nostalgic about something”.

In the direct condition, music from two different time-periods of life was used as the stimuli for the nostalgic experiences—childhood and teenage years. The order of presentation of the target time-period was counterbalanced. In order to standardise the music that was to be used as stimuli, popular music from past years was chosen, as the participants were likely to have listened to these songs play on the Radio, on Television or on public address systems in various public places, even if they did not prefer this type of music. This was done to ensure that a relevant autobiographical stimulus was used in the study. To further increase the likelihood that the song would be relevant and to find a standardised method through which to choose the songs, only the top two songs of each year from the New Zealand Music Top Charts were chosen. The songs were then purchased through Google Music. The top two songs from the calendar years 1989–2014 were selected and a list was drawn for the songs against the calendar years. The calendar years were calculated as per the time-period that was aimed for (target period) in the study.

For the childhood years, the target period (i.e., songs) was aimed to be from when the participant would have been of age 7–10 years. For the teenage years, the target participant-age-range was 12–15 years. The original target ages were 8–10 years and 13–15 years, but since the study was started in 2017 but continued through to 2018, the lower end of the target age-ranges increased by one year.

As the study was conducted over 2017 to the middle of 2018, participants who were 18-years-old in 2017/2018 would have been either 15- or 14-years-old in the calendar year of 2014. Therefore, this year was chosen as the end-point for the music selection. A sample age-

range of 18–35 years was aimed for in the direct condition, thus, the higher-end of the target sample-age-range was 35 years. A participant who was 35 in 2017/2018, would have been 8- or 7-years-old in the calendar year 1989; therefore, this was chosen as the start-point of the music selection. The direct stimuli for the participants of ages in between 18–35 years of age (in 2017/2018) would have been covered under this cohort of music selected from the above-mentioned calendar years.

3.2.2.1.2 Individual-Difference Independent Variables

All other independent variables used in the study were individual-difference factors that were not experimentally manipulated but varied through the process of selection.

Analyses for these independent variables are discussed in Chapter 5.

Age and Gender. Information on individual-difference factors were collected through written reports where participants were asked to state their age and gender.

Place of Living. Places of living (categorical variable) was defined as the place (city/town) of current residence. Places of past residence were also asked for. From this recorded information, a participant's hometown and home-country was deduced and the categorical variables were computed to state whether the participant was currently residing in their hometown and home-country.

For place of living, participants were asked to list the names of the places they had lived in and to indicate how long they lived in each city/town. Hometown was judged as the place (town/city) one spent the majority of their childhood. For an individual who frequently changed their place of residence in childhood, the following rules were followed for obtaining an objective definition of their hometown—(i) the place they grew up in from age 0–8 years, or if they did not grow up in one place during these years of life, then, (ii) the place they lived in for the longest duration during their school years, for at least a minimum of three years, and up to the age of 18 years.

Culture. Culture was not explicitly recorded but data were inferred from participant's current and past places of residence. From this recorded information, only participants who grew up in New Zealand were considered for the NZ sample. For the Indian sample, only the data collected in Kolkata, India were considered.

Nostalgia-Proneness. Nostalgia-proneness (continuous variable) was defined as an individual's propensity to feel nostalgic and the importance/significance of nostalgia in that person's life. It was measured through the revised Southampton Nostalgia Scale (SNS) designed by Routledge et al. (2008); the revised version was first reported in Barrett et al. (2010). The SNS is a standardised seven-item tool that uses seven-point Likert scales for each item, ranging from '1'—'not at all' to '7'—'very much' ($\alpha = 0.92$). The items measured the importance one ascribes to nostalgic experiences and how frequently one experiences nostalgia. All items (Table 3.1) were positively scored; the maximum possible score was 49 and the minimum was 7; higher scores represented greater nostalgia-proneness.

Table 3.1. Southampton Nostalgia Scale.

Item No.	Item	Scale
1	How valuable is nostalgia for you?	1—'not at all' to
2	How important is it for you to bring to mind nostalgic experiences?	7—'very much'
3	How significant is it for you to feel nostalgic?	
4	How prone are you to feeling nostalgic?	
5	How often do you experience nostalgia?	1—'not at all' to
6	Generally speaking, how often do you bring to mind nostalgic experiences?	7—'very frequently'
7	How often (approximately) do you bring to mind nostalgic experiences? (Please check one.)	7—'At least once a day' 6—'Three to four times a week' 5—'Approximately twice a week'

4–‘Approximately once a week’
 3–‘Once or twice a month’
 2–‘Once every couple of months’
 1–‘Never’

Life Satisfaction. Life satisfaction (continuous variable) was measured by a single item (Kemp & Chen, 2012); shown in Figure 3.3.

On a scale from 0 to 10, please rate how you feel about your life as a whole these days.										
0	1	2	3	4	5	6	7	8	9	10
completely awful										completely marvellous

Figure 3.3. Life Satisfaction Scale.

3.2.2.1.3 Trait Experiential Nostalgia

The experiential nature of nostalgia was measured at both state and trait levels. At the *trait level*, the nostalgic experiential nature was measured in terms of the **affective** and **motivational natures** of *general nostalgic experiences* that the participants usually have. The state level measures are described further down under dependant variables.

Trait Level Affective Nature. Affective nature (continuous variables) here referred to (i) the affective valence (‘positive’, ‘negative’ and ‘mixed’) of participants’ general nostalgic experiences, and (ii) the emotions and feelings (‘affection’, ‘gratitude’, ‘achievement’, ‘sense of loss’ and ‘life seems meaningful’) contained in their general nostalgic experiences. For trait nostalgia, affective nature was measured through a questionnaire (using a 7-point Likert scale) where participants were asked to indicate their

agreement with the items, with regards to their general nostalgic experiences. Items in the questionnaire are listed in Table 3.2.

Table 3.2. Items on Trait Affective Experiential Nature.

Item No.	Item	Scale
1	I feel happy recalling ‘those times’	1–‘ Entirely Disagree’
2	I feel sad recalling ‘those times’.	2–‘ Mostly Disagree’
3	I feel both happy recalling ‘those times’ and sad, at the same time, that ‘those times’ are over.	3–‘ Somewhat Disagree’ 4–‘ Neither’
4	I feel affectionate towards life and the past, thinking about ‘those times’.	5–‘ Somewhat Agree’ 6–‘ Mostly Agree’
5	I feel a sense of achievement, thinking about ‘those times’	7–‘ Entirely Agree’
6	I feel a sense of gratitude thinking about ‘those times’.	
7	I feel a sense of loss, thinking about ‘those times’.	
8	Life seems meaningful, when I think of ‘those times’.	

Trait Level Motivational Nature. For the trait nostalgic process, the different motivational categories obtained from Study 1 were observed separately and were measured as continuous variables on a 7-point Likert scale. Following from Study 1, there were three broad types of motivational natures (Table 3.3) that were explored—(i) a wish to go back to the past (items 1a and 1e), (ii) or a wish to simply relive the event in mind (item 1c) and (iii) a wish to re-experience similar events in the future (item 2). The first two types of motivational natures were explored in the context of what it means to ‘miss the past’ (item 1), to observe if *missing the past* entails a *wish to go back* to it or if it is just a wish to *relive the past in mind*. The motivational nature of wishing to go back was further explored in terms of wishing to *live the past all over* again (item 1a) and wishing to return to the past to only

momentarily relive the past (item b), following from the descriptions of nostalgic experiences obtained in Study 1 (see Chapter 2, Section 2.3.4).

A third nostalgic motivational nature of wishing to experience *similar future times* (item 2) was explored as a separate concept to observe if it at all had a place in the general experiences of nostalgia. This concept was explored to see if nostalgia included a future-oriented component of recreating the past events, and whether the significant factor in the future recreation of events pertained to the ‘people’ (item 2a) or the ‘places’ (item 2b) that made up the past event. These two factors were chosen for further exploration because in Study 1, the most important *object of nostalgia* was found to be ‘people’, i.e., when one is nostalgic, it is the characters in the event that are the focus of the experience. The second most frequent object of nostalgia in Study 1 was found to be the ‘event’ itself, followed by ‘place’. However, ‘place’ was chosen as a factor for exploration here as, first, it is more specific than ‘event’, which encompasses both ‘people’ and ‘place’. Moreover, enquiring about one’s wish to have ‘similar experiences’ already draws out the features that would form the anatomy of an ‘event’. Third, in line with nostalgia’s origins, exploring the wish to return to a place would be of greater relevance and significance to the existing literature than exploring the factor of ‘event’ as an object of nostalgia.

Table 3.3. Items on Motivational Experience.

Item No.	Item	Scale
1	I miss ‘those times’.	1–‘ Entirely Disagree’
1a	I wish I could go back to that time-period of my life and <i>live it all over again</i> .	2–‘ Mostly Disagree’ 3–‘ Somewhat
1b	I wish it was possible to go back in time and <i>momentarily</i> experience ‘those times’ again.	Disagree’ 4–‘ Neither’
1c	I <i>enjoy reliving</i> ‘those times’ <i>in my mind but do not wish I could go back</i> in time and experience them again.	5–‘ Somewhat Agree’ 6–‘ Mostly Agree’

-
- | | | |
|---|--|---------------------|
| 2 | I want to experience <i>similar ‘times’ again in future.</i> | 7–‘ Entirely Agree’ |
|---|--|---------------------|
-
- | | | |
|----|---|--|
| 2a | I want to have similar future experiences with the <i>same people</i> I had shared these past ‘times’ with, irrespective of where we are. | |
|----|---|--|
-
- | | | |
|----|--|--|
| 2b | I want to go back to the <i>same places</i> where I had ‘those times’ and have similar future experiences, irrespective of who I have them with. | |
|----|--|--|
-

3.2.2.2 Dependent Variables

The dependent variables (DVs) and their measures were as follows.

3.2.2.2.1 Process Parameters Obtained from the Slider

Some process parameters were measured through the use of an apparatus, referred to here as a ‘Slider’, which worked on the principle of a dynamometer. Other parameters were measured from reports of the event provided by the participants. The parameters are described below, followed by a description of how they were measured.

Response Time. Response time (continuous variable) was defined as the time taken for one to feel nostalgic after being exposed to the stimulus. It was measured in terms of time taken (in milliseconds).

Duration. Duration (continuous variable) referred to the time-period for which the state nostalgic experience lasted, i.e., a time-period bounded by the start and end of the slider press at the two end-points. It was measured in terms of time taken (in milliseconds).

Intensity. Intensity (continuous variable) referred to the strength of the nostalgic experience, as reported by the experiencer through the use of the Slider and on a Likert scale.

Variation. Variation (continuous variable) referred to the variation in intensity of the nostalgic experience, as reported by the experiencer through the use of the Slider.

These parameters of the operational process were measured through the use of an apparatus that worked on the principle of a dynamometer, and is referred to here as a ‘Slider’

(see Figure 3.4). The slider was a handheld device, that resembled a small hand-held gun and had a metal slider that could move back and forth along a small metal strip (like that in a water-pistol), for a distance of 3 cm. The movement of this slider along the metal strip generated corresponding digital numerical values that ranged from -0.59 (minimum) to $+0.60$ (maximum). These values were recorded as raw positions of the metal slider against time, which corresponded to the resultant intensity level of the nostalgic process function. Raw position data were sampled at 40 milliseconds. Participants were asked to press the metal slider to indicate the intensity of their nostalgic feeling, to increase the pressure to indicate greater intensity and decrease the pressure without releasing it completely, to indicate lower intensity. This is described in detail in the Procedure section.





Figure 3.4. The Slider

The report of the nostalgic experience obtained from the participant's use of the slider generated a process function, which reflected the intensity levels of the experience. The process function of the nostalgic experience was recorded by the extent of the slider press across the duration of experience. The raw position of the metal slider was measured from the moment of the first slider press to the moment it was let go; letting go of the slider would bring down the raw position of the metal slider back to -0.59 again. The process function data file generated for each participant contained one column listing the 'clocktime' and another listing the raw position of the metal slider (which would be a value between -0.59 and $+0.60$), against each point of the clocktime. The raw positions of the metal slider, thus, provided the intensity levels for the nostalgic process function. From here on, the term 'intensity level' is used to refer to the raw position of the metal slider at different time points. Examples of the raw and transformed slider data file are shown in Tables 3.4 and 3.5.

Table 3.4. Example of a Raw Data File Obtained from the Slider for the Process Function of the Nostalgic Experience.

Clock Time (in ms)	Raw Position
1354669	-0.5899
1354709	-0.5879
1354749	-0.5684
1354789	-0.5625
1354829	-0.5625
1354869	-0.5606
1354909	-0.5606
1354949	-0.5606

Table 3.5. An Excerpt of the Transformed Data File for the Slider Process Function Data.

Subject ID	MIL	AIL	Ratio of MIL:AIL	RT (in seconds)	Duration (in seconds)
01.UT	0.447	0.3405169	1.313884878	9.41	31.2
02.UT	0.17	0.1682641	1.010316516	11.1	28
03.UT	0.588	0.2328595	2.525128097	4.41	23

MIL—maximum intensity level, AIL—average intensity level, Ratio of MIL:AIL—ratio of maximum intensity level to average intensity level, RT—response time.

Three measures of this process function were extracted as the assessment parameters of intensity and variation—the average and the maximum levels of intensity, and the ratio of the maximum to the average intensity (all of which were continuous variables). It was measured in terms of the raw position of the slider (varying on a numerical scale of -0.59 to $+0.59$, with up to 15 decimal points), against time taken (in milliseconds). The **maximum** and **average intensity level** (AIL, MIL, respectively), and the **ratio of the maximum to the average intensity level** (MIL:AIL) were, thus, calculated for each participant. The values

obtained for each parameter was then normalised by adding 0.59 to each in order to get rid of the negative numbers. The new normalised scale of values could then range from 0–1.19 (i.e., $(-0.059 + 0.059) - (0.60 + 0.59)$).

The maximum intensity level and average intensity level, thus, gave an indication of the strength of the perceived nostalgic intensity. The maximum intensity level indicated the maximum intensity that was reached during the state nostalgic experience, for each participant. The average intensity level indicated the average level of intensity of the state nostalgic experience. The ratio of the maximum to average intensity level (MIL:AIL) was calculated to get an estimate of the intensity variation in the nostalgic process function. The lower the ratio of the maximum to average intensity level, lower the variation; and the higher the ratio, higher the variation. A lower ratio value thus indicates that these participants had a more uniform nostalgic experience, and a higher ratio value indicates that these participants had a more varied experience in terms of intensity nostalgia.

The time-point when the slider press was started and stopped were obtained from the Slider data. This provided the duration of the nostalgic experience. The E-Prime Presentation software provided the time-point for the cue-presentation; the difference between the time-point for the first slider press and the time-point for the cue presentation provided the response time for the nostalgic experience.

3.2.2.2.2 Process Parameters Obtained from Verbal Reports

Intensity. The intensity of the nostalgic experience was additionally rated on a 7-point Likert scale, against the question, “How intense, would you say, was the nostalgic experience you had in the course of the experiment?” The answers ranged from ‘1’—‘very weak’, ‘4’—‘as strong as most other nostalgic experiences I have had’, ‘7’—‘one of the strongest nostalgic experiences I have had’.

Age at Event. Age at event (continuous variables) referred to the time-point (in terms of age) of the recalled event. It was measured as age in years on a graphical timeline (Figure 3.5. Event Graph).

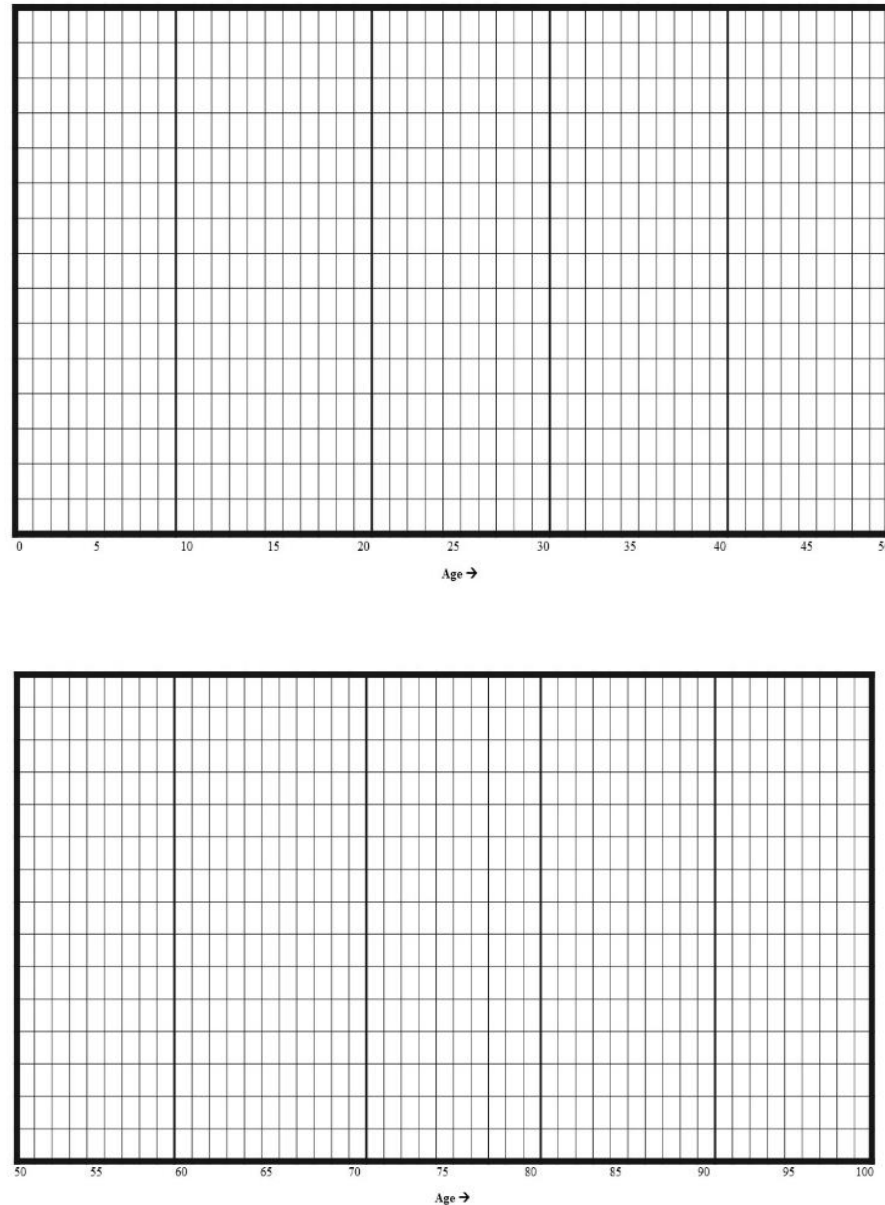


Figure 3.5. Event Graph; page 1 (**top**) and page 2 (**bottom**).

Age of Memory. Age of memory (continuous variables) referred to the temporal distance of the recalled memory from the present, i.e., how long ago the event occurred. It was measured in years, by subtracting *age at event* from participant's *age*.

3.2.2.2.3 Event Characteristics

The term ‘event characteristics’ referred to the content and descriptions of the event recalled during the state nostalgic phenomenon, i.e., the different components of the event structure.

Event Type and Count. Event type (categorical variable) referred to the specificity of the recalled event, i.e., whether the event was specific and narrow in scope, or broad and thematic in nature. It was coded as either ‘specific’ or ‘thematic’. This coding procedure is elaborated on in Chapter 4, along with the description of event results. Event count (continuous variable) referred to the number of events recalled. This was recorded on the Event Specification Sheet (Figure 3.6). It was measured in terms of frequency.

The event count and names were noted down by the participant on an Event Specification Sheet. The first page of the event specification sheet contained items that measured the event count; shown in Figure 3.6. The second page of the Event Specification Sheet contained items that recorded event name or title for each recalled event; shown in Figure 3.6.

Did you think of a single event from your life or more than one event?

For each of the event (or the one event) you thought of, assign a brief title that will later help you identify the event, and list them down below.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

Figure 3.6. Event Specification Sheet; page 1 (**top**) and page 2 (**bottom**).

The rest of the event characteristics were recorded by the experimenter on an Event Information Form (Table 3.6). This form was used to record the event location, characters, activity, affective tone and setting. It contained a table that was customised to include the standard categories for these event characteristics. The standard categories were primarily those obtained from the survey questions of Study 1; however, the form was updated as data collection proceeded, to include any new category mentioned by participants that was not already included in it.

Table 3.6. Event Information Form.

Event Characteristic	Categories
Frequency	One-off; routine/repetitive
Location–place	Hometown/frequently visited town; other town/city
Location–locality	Frequently visited; not-visited frequently
Characters	Family/relatives; friends/partner; only self; acquaintances; pets/other animals
Activity	<i>n/a</i>
Setting–time of day	Morning; afternoon; evening; night-time; all throughout the day; no fixed time
Setting–time of year	Summer; winter; spring; autumn; monsoon; all throughout the year; different seasons; no season
Setting–indoor/outdoor	Indoor; outdoor; in vehicle
Affective Tone	Positive; negative; mixed; neutral
State Experiential Nature	Categories
Affective Tone	Positive; negative; mixed
Motivational Intent	Go back; do not wish to go back (with or without missing the past)

Frequency. Event frequency (categorical variable) referred to the number of times the event had occurred in a specified time-period, i.e., frequency of occurrence of the event. It was coded as either ‘one-off’ or ‘routine/repetitive’ events. Coding was done during data collection, i.e., as per participant report and was recorded on the Event Information Form.

Location. Event location (categorical variables) referred to the place (city/town) and locality (home, work, neighbourhood, etc.) where the recalled event took place. Event place was coded as either ‘hometown’ or ‘different city/town’. Event locality was coded as a ‘frequently visited’ or ‘not frequented’ locale. Coding was done during data collection and was recorded on the Event Information Form.

Characters. Event characters (categorical variable) referred to the people that were present in the event, who were noted in terms of their relationship to the participants, i.e.,

family, friends or acquaintances. It was coded as either ‘loved ones’/‘close friends’ or ‘acquaintances’/‘unknown people’. Coding was done during data collection and was recorded on the Event Information Form.

Activity. Event activity (categorical variable) referred to the actual ‘task’ that was in action in the recalled event. At data collection, the activity was noted down in words, as described by the participant. This was later coded as ‘leisure/hobby’, ‘routine’, or ‘social gatherings’. The coding procedure is elaborated on in Chapter 4, along with the results.

Setting. Event setting (categorical variables) referred to the background characteristics or setting of the event, e.g., time of day, time of year, indoor/outdoor environment. Time of day was coded as ‘morning’, ‘afternoon’, ‘evening’ or ‘night’. Time of year was coded in terms of month (January–December) or season—‘spring’, ‘summer’, ‘autumn’, ‘winter’, ‘monsoon’, ‘all throughout the year’ or ‘no seasons’ (for tropical countries). Coding was done during data collection, i.e., as per participant report, and was recorded on the Event Information Form.

Event Affective Tone. Affective tone (categorical variable) referred to the valence of the affect felt by the individual *during the event itself* whilst it was taking place in the past, and not during the course of the nostalgic experience when this event was recalled. It was coded as ‘positive’, ‘negative’, ‘neutral’ or ‘mixed / both positive and negative’. Coding was done during data collection, i.e., as per participant report, and was recorded on the Event Information Form.

3.2.2.2.4 State Experiential Nostalgia

Nostalgic experience was also measured as an outcome variable at the state level. At the *state level*, the nostalgic experiential nature was measured in terms of its **phenomenology**, the **affective tone** and **motivational intent** of the *nostalgic experience* that the participants had *in the course of the experiment*.

Phenomenology. Phenomenology (continuous variables) referred to the clarity of the event recalled, in terms of the sensorial aspects of recall and the cognitive aspects of belief in the reality of the recollected event. The phenomenology variables were divided into two main sub-components—*sensory* components and *belief and recollection* components. The variables pertaining to the sensory components pertained to the degree of clarity involved in the events in terms of ‘hearing’, ‘seeing’, ‘talking’, ‘emotions’ felt, recall of ‘spatial layout’ and ‘setting’, recall of events ‘in words’ and recall of the event as a ‘coherent story’. The variables pertaining to the belief and recollection components pertained to the degree of belief involved in the clarity of the event recall. The variables included belief in ‘remembering’ that the event happened rather than simply ‘knowing’ that it did; and belief that the event ‘really occurred’ the way it was recalled. The recollection variables included the amount of ‘reliving’ involved in the event recall and the degree of ‘travelling back in time’ involved in the event recollection.

The items of Rubin’s scale represent different aspects of phenomenology and the different items do not measure one unified construct of phenomenology. Therefore, no reliability measure of the scale as a whole is available. However, in a study by Rubin et al. (2003b), a within-subject analyses of each item for 30 trials (i.e., memories elicited by 30 different stimuli) showed a high reliability ($\alpha = 0.84\text{--}0.96$) for each item.

These items were measured as Likert scale ratings (see Table 3.7 for items). These measures were obtained as verbal reports from the participant and the Likert-scale ratings were noted down by the experimenter. This procedure is elaborated on in Section 3.2.3 under the sub-heading ‘Instructions and Procedure for Observing the Event Characteristics and the Experiential Nature of State Nostalgia’

Table 3.7. Rubin's Phenomenology Scale.

Item No.	Item	Scale
1	As I remember the event, I feel as though I am <i>reliving</i> the original event.	1–'not at all' 3–'vaguely'
2	As I remember the event, I can <i>hear</i> it in my mind.	5–'distinctly'
3	As I remember the event, I can <i>see</i> it in my mind.	7–'as clearly as if it were
4	As I remember the event, I or other people are <i>talking</i> .	happening right now'
5	As I remember the event, I know its <i>spatial layout</i> .	
6	As I remember the event, I can feel the <i>emotions</i> that I felt then.	
7	As I remember the event, I can recall the <i>setting</i> where it occurred.	
8	Sometimes people know something happened to them without being able to actually <i>remember</i> it. As I think about the event, I can actually remember it rather than just knowing it happened.	
9	As I remember the event, it comes to me <i>in words</i> .	1–'not at all'
10	As I remember the event, I feel that I <i>travel back to the time</i> when it happened.	3–'vaguely' 5–'distinctly'
11	As I remember the event, it comes to me in words or in pictures <i>as a coherent story</i> or episode and not as an isolated fact, observation, or scene.	7–'as much as any memory'
12	As I remember the event, I imagine it again through my <i>own eyes</i> seeing what I would have seen then, or as an <i>observer</i> from a different perspective than the one I had.	1–'own eyes' 2–'observer' 3–'can't tell'
13	I believe the event in my memory <i>really</i> occurred in the way I remember it and that I have not imagined or fabricated anything that did not occur in the event, I felt as though I am reliving the original event.	1–'100% imaginary' 7–'100% real'

14	Since it happened, I have <i>thought</i> or <i>talked about</i> this event.	1–‘not at all’ 3–‘sometimes’ 5–‘many times’ 7–‘as often as any event in my life’
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State Level Affective Tone. Affective tone (categorical variables) here referred to the valence of the affect felt by the participants during the nostalgic experience they had in the course of the experiment (and *not* the affective tone of the recalled event). For state nostalgia, it was coded as ‘positive’, ‘negative’ or ‘mixed / both positive and negative’, as per the participant’s report and was recorded on the Event Information Form (Table 3.4).

State Level Motivational Intent. Motivation (categorical and continuous variables) referred to the motivational intention of the individual having the nostalgic experience, i.e., the objective/motivational goal on the part of the individual during the nostalgic experience they had in the course of the experiment. For the state nostalgic process, motivational intention was measured as a categorical variable. It was coded as ‘wish to go back’ or ‘do not wish to go back’, as per the participant’s report and was recorded on the Event Information Form (Table 3.4).

3.2.3 Procedure

Participants were presented with the instructions and given a demonstration on the use of the Slider (described in the Variables and Materials section). The instructions given in the two experimental conditions are listed below.

3.2.3.1 Instructions and Procedure for the State Nostalgic Experience in the Indirect Condition

Participants were told that in the course of the experiment, they would have a nostalgic experience and while they were having those experiences, they were to use the Slider to indicate the intensity of their experience. They were asked to hold the device using

their dominant hand and keep their finger placed on the metal slider. Once the experiment started, they would be given a cue that would instruct them what to do. The cue would only appear for a few seconds. Once they received the cue, they were asked to close their eyes and keep them closed. They were asked to press the metal slider only when they started to feel nostalgic and to keep it pressed for the entire time that they felt nostalgic. They were asked to increase the pressure on the button at those times when they felt more intensely nostalgic and to release the pressure when they felt less intensely nostalgic. When they stopped feeling nostalgic, they were asked to release the metal slider and open their eyes. These instructions were first presented to the participants verbally along with a demonstration of how to use the Slider. Participants were then asked to move to the computer where the first half of the study would be conducted and the instructions were again presented to them, on-screen. This was done to ensure that the participants had a clear understanding of how to use the device and what was expected from them in the experiment. They were asked to clarify any questions they had, at this point, before proceeding on to the next stage.

Then, a brief Oxford English Dictionary definition of ‘nostalgia’ was presented to them on screen, which read, “Nostalgia is ‘a yearning or a feeling of longing for the past’.” A few lines below this definition, instructions on the screen asked the participants to “press any key to **get the cue**”. On the press of the key, the screen read “Your Cue:” and then a few lines below, it asked the participant to “Feel nostalgic about something”. The cue was visible on screen for 2 seconds after which the screen went blank. As per the instructions, participants would have had their eyes closed after receiving the cue and would have only pressed the metal slider when they started to feel nostalgic. They would have kept the metal slider pressed, while increasing and decreasing the pressure on it to indicate a change in the intensity of the nostalgic feeling, and would have released it once they stopped feeling nostalgic. During the verbal instructions, participants were additionally told that once they get the cue, the screen will go blank and they should then close their eyes. They were also told to

not press the metal slider immediately and it did not matter how long it took for them to press the slider, they were asked to relax and to *only* press the metal slider *when* they started feeling nostalgic. This was done to ensure that a proper response time reading was obtained. Once they stopped feeling nostalgic and released the metal slider, the instructions on the screen informed them that they were all done and to let the experimenter know about it, who would then ask them some questions. While the participants had their nostalgic experience, the experimenter made sure to stay out of their peripheral line of vision, in order to give the participants some space to feel comfortable enough for them to close their eyes and delve into personal memories.

3.2.3.2 Instructions and Procedure for the State Nostalgic Experience in the Direct Condition

The instructions for the direct condition were mostly similar with one major difference—participants were instructed that the cue they receive would be an audio clip. To start the experiment on the computer, participants were asked to enter their age. The E-Prime software then presented them with a list of six songs in each of two experimental blocks (counterbalanced). The list included two songs each for the corresponding selected childhood and teenage years (i.e., ages 7–10 years and 12–15 years). The list included six songs instead of eight from the corresponding target years as the E-Prime program was designed in 2017 when the selected target age-range was 8–10 years and 13–15 years, and two songs were presented from each year; however, as the data collection carried on into 2018, the target age-ranges automatically became slightly variable. Therefore, in the discussion here only the wider age-range has been reported.

In the song list, short sample clips—of about 5 seconds from the chorus of the songs—were presented alongside each song. This was done to ensure that the participants knew exactly which song they were selecting. Participants could listen to each of the samples but were asked to select only one song to listen to. Once a song was selected, participants

were asked to press the corresponding song number, which changed the screen to a blank display and the song started playing to the participants through a headphone. The rest of the instructions remained the same—participants were asked to close their eyes, press the slider if they felt nostalgic and let go of it when they stopped feeling nostalgic, which ended this stage of the study. Participants were instructed to not press the slider at all if they did not feel nostalgic, in which case the song stopped playing after one minute.

The rest of the procedure remained the same in both experimental conditions, except that in the direct condition, after the event characteristics data were recorded participants were asked to return to the computer for the second block of the state nostalgic process, following which the event characteristics were recorded for the second block of the experimental condition. Only after both blocks of the state nostalgic data were recorded, the experimenter moved on to record the trait nostalgic and individual difference factor data.

3.2.3.3 Instructions and Procedure for Observing the Event Characteristics and the Experiential Nature of State Nostalgia

After the state nostalgic process was recorded, participants were asked to move back to the previous table, where the rest of the study was then conducted. Participants were presented with the Event Specification Sheet (Figure 3.6); they were asked to first write down how many events they thought of and to assign each event a brief title or a reference name so that they know what the contents of the event were. The experimenter then took away the event sheet and for each event, participants were asked the questions on the event characteristics. As they described the event characteristics, the experimenter filled out the Event Information Form (Table 3.6). The experimenter also asked participants about the affective tone of the nostalgic experience and motivational intent in each event and recorded them on the Event Information Form.

For the first sixty-eight participants, after the event characteristics of all events were noted down, the participants then filled out the Rubin Scale by themselves. However, for the

participants who thought of more than one event, their responses to the phenomenology scale would have varied between events, therefore, the procedure was then slightly modified. After the event characteristics for the first event were noted down, the experimenter then asked the phenomenology questions (i.e., questions on the Rubin scale) to the participants, who were provided with a copy of the scale, and the experimenter noted down the responses to each item on their copy. Therefore, the sixty-ninth participant onwards, the phenomenology responses only pertained to the first event, in those cases where more than one event was recalled. However, an independent sample *t*-test showed no difference between the phenomenology responses of the first sixty-eight and the rest of the participants.

3.2.3.4 Instructions and Procedure for Observing the Experiential Trait Nostalgic

Process and the Individual Factors

After this, the participants were provided with the questionnaire on the trait affective and motivational nature of nostalgia (Tables 3.6 and 3.7, respectively), the Southampton Nostalgia Scale and the participant information sheet where they stated their age, gender and place of living. The participants were left by themselves to fill these out. Once they were done, the experimenter returned to the table and presented participants with the Event Graph timeline where they were asked to indicate the age at which each event occurred.

3.2.4 Sample

The study samples were slightly different for the state and trait level analyses of nostalgia. These are further described in Chapters 4 and 5.

This chapter sums up the research questions and methodology used in Study 2. In the next two chapters, the study results are discussed. The results of the experimental manipulation of nostalgic trigger are discussed in Chapter 4 and the results of the influence of individual-difference factors and trait nostalgia are described in Chapter 5.

4 Chapter 4: Study 2—Experimental Analyses of State Nostalgia Triggered by Direct and Indirect Stimuli

Chapter 3 describes the research design for Study 2, which aimed to look at the state and trait level differences in nostalgia. This chapter presents the results of the state level differences in nostalgia.

The extant literature discusses the complex nature of nostalgia. There is also an argument to be made that, as an affective state, nostalgia is a dynamic process that likely varies over time. Thus, as elaborated on in Chapter 3, there is a need for an empirical, *in vitro* observation of the state nostalgic process and its different components. Such an observation would help establish what constitutes nostalgia and would throw some light on the conflicting evidence for its affective valence and its beneficial/harmful nature. Therefore, in Study 2, a state level observation of the cognitive, affective and motivational components of nostalgia was carried out.

The nostalgic operational *process* started with the *trigger* (music or instructions) that led to the recall of an *event*, which led to the nostalgic *experience*. The experience involved a mental simulation (phenomenology), an affective state and a motivational intent. In this chapter, the results pertaining to the differences in the state nostalgic process (as observed in this study) are divided into three sub-sections and are presented in the context of the *process parameters*, the *event characteristics* and the *experiential nature* of state nostalgia, with respect to the *trigger* that elicited nostalgia, i.e., the experimental conditions.

4.1 Sample for State Level Analyses

Sampling Technique. A purposive and incidental sampling method was used.

Source of Sample. The majority of the participants were recruited from the University of Canterbury, in Christchurch, New Zealand. The participant pool mostly comprised of university students and staff who were recruited through advertisements on digital and physical noticeboards in the campus, and through emails sent out by the

university's communication system. Advertisements were also posted on a local social media platform called 'Neighbourly', in order to recruit older participants of the community.

Participants received a 10 NZD gift voucher or petrol voucher as a token of appreciation for their time. A major portion of the student participants was recruited from first-year psychology undergraduate courses, who were offered extra course credits for their participation in the study.

Participants who grew up in NZ were selected for the direct music condition to ensure that the priming worked, as the music used as the stimuli were from the NZ music top charts. However, at times, participants from the USA, the UK, Australia and Canada were also selected for this condition, as it was assumed that the songs used would also have been popular in these other countries where English is the primary language.

For the Indian sample, participants were recruited through word-of-mouth and social media advertising. The participant pool was not concentrated to a university campus but did include a few organisational clumps. Parts of the sample were sourced from the Gokhale Memorial Girls' College, Techno India Institute of Technology, Delgence Incorporated and Rave Fitness Studio, all of which were located in Kolkata, India. The rest of the sample included community members recruited through word-of-mouth. Participants received a 100 INR Oxford Bookstore gift voucher as a thank you for their time.

Inclusion Criteria. The inclusion criteria were anyone above 18 years of age and fluent in reading/writing English.

Exclusion Criteria. The exclusion criteria were anyone with a hand injury in their dominant hand as that would interfere with the use of the slider.

From the overall sample, a few participants were outliers. These are described below, but the data were excluded from all subsequent analyses.

- i. Participant No. 12 (indirect condition): The participant experienced historical nostalgia, where he imagined himself to be at musical concerts of his favourite bands

(whose members are now dead), he imagined being in the crowd and went through memories of his favourite songs being performed by the band in a live concert. These were memories that he had formed from watching videos of their live performances. This was the only participant to describe an historical experience in this study.

- ii. Participant No. 42 (indirect condition): The participant was overwhelmed after having the state nostalgic experience. The participant answered the questions for the 'event type' but broke down and burst into tears while describing the event recalled, as it was too painful to her. She was reminded that she could end her participation at any point of time during the course of the study and she did not want to continue with it.
- iii. Participant No. 77 (indirect condition): No valid data were collected from this participant as she generally stops herself from reflecting on the past. The participant said that she meditates on the present and forcefully stops herself from going into the past; as a result, she was not able to have a nostalgic experience.
- iv. Participant No. 99 (indirect condition): Her data were deleted as along with the participant being an outlier, there was a possible confound. The nostalgic duration was extremely long—22 minutes, which was about 10 times the average observed duration. Furthermore, this data-point might have been a confound because the participant was specifically recruited after participant no. 77, as the experimenter was curious to see if those who meditated, showed a different kind of nostalgic experience. However, as the subject was searched for and recruited because she meditates, it might have given her the idea that she needed to 'meditate on the past' as a way of feeling nostalgic, as the participant told the experimenter, at the end of the session that she 'tried' to keep her focus on one 'thing', but it went on to the other two aspects of the memory she had recalled. After this, no other subject was recruited specifically because they meditated.

Besides these above-mentioned cases, several others were individually deleted for particular analyses but were used in others. This was especially the case for the process parameters data obtained from the Slider, as in some cases participants failed to follow the instructions properly and pressed the slider immediately after the blank screen and not when they started to feel nostalgic. This would have invalidated the response time data and, thus, these entries were deleted. Some entries were deleted due to other errors in the data, such as failure to press the metal slider properly or because the music stimulus was not relevant and the participant did not know any of the songs. Thus, in the results described in this chapter, the sample sizes vary for the different observed variables.

Experimental Conditions. The sample for the between-group (indirect and direct conditions) analyses of Study 2 contained 397 participants with $N = 242$ and 156 for the Indirect Stimulus and the Direct Stimulus conditions, respectively.

Age and Gender Distribution. The age (Table 4.1) and gender (Table 4.2) distribution of the participants are listed in the tables below. The age range was limited to 18–35 years in both the direct and the indirect conditions.

Table 4.1. Descriptive Statistics for the Sample Age Distribution in the Two Experimental Conditions.

Variable	Sample	Mean	Median	SD	Range	N
Age (in years)	Indirect	23	21	5.02	18–35	242
	Direct	21	19	4.14	18–35	156

In the overall sample, there were more females (66%) than males (34%) and one person who identified as agender (0.2%), out of the total 397 participants.

Table 4.2. Descriptive Statistics for the Sample Gender Distribution in the Two Experimental Conditions

Variable	Sample	Male	Female	Agender	N
Gender (in %)	Indirect	31	69	0	242
	Direct	38.5	60.9	0.6	156

The sample in the direct condition comprised individuals of age 18–35 years-old, who mostly grew up in New Zealand, and a few who grew up in Australia, Canada, the UK and the US. The indirect condition comprised a multicultural sample of individuals aged 18–35 years, who grew up mainly in New Zealand but also in other countries like Australia, Canada, China, India, South Africa, the UK, the US, etc.

As the study used random assignment to experimental conditions, the influence of the individual-difference factors should be controlled for, except for that of age, as in the direct music stimulus condition, age was limited to the range of 18–35 years-old. Therefore, in the analysis of the effect of trigger on nostalgia (Chapter 4), from the indirect instruction condition only the data for 18–35-year-old were included in the analysis. Another possible confound in the analyses could be culture as the samples in the two conditions were not perfectly matched for culture, which could be a possible covariate. Therefore, a between-condition analyses with culture as a covariate was first conducted, and the effect of the experimental manipulation was still found to be significant, after controlling for cultural differences.

As the age was limited to 18–35 years in the direct music condition, for all analyses between the two experimental conditions presented in this chapter, the age in the indirect stimulus condition was also limited to 18–35 years; and only the first block of the direct condition was included in the between experimental-conditions analyses. In the last section of

this chapter, results of the between-block analyses for the direct (music) stimulus condition are described.

4.2 The Process Parameters

In this section, results for some of the parameters of the cognitive process are discussed. These parameters include response time, duration, intensity, variation, age at event and age of memory.

4.2.1 Response Time (RT) and Duration

Nostalgia began slightly later in the indirect (RT = 15 seconds) than in the direct condition (RT = 13 seconds), and on average was completed more quickly in the indirect (duration = 2 minutes and 32 seconds) than in the direct condition (duration = 3 minutes and 2 seconds); see Table 4.3. No significant differences were observed in the response time ($N = 143$ for the direct condition and $N = 220$ for the indirect condition) but a significant difference was observed in the duration of experience of the two experimental conditions, $t(350) = -2.077, p < 0.05$.

Table 4.3. Descriptive Statistics for Response Time (RT) and Duration (in seconds) in the Two Experimental Conditions.

Variable	Sample	Mean	SD	Range	N
RT	Indirect	15.23	25.89	2–198.89	220
	Direct	12.67	11.77	0.04–54.04	143
Duration	Indirect	152.56	176.33	1.28–873.68	220
	Direct	182.18	94.25	2.80–784.92	143

It was expected that the response time would be lower in the direct than in the indirect condition as the former condition would provide a direct cue to a memory and would thus lead to a faster elicitation of a memory. A direct stimulus took lesser time to elicit nostalgia

than an indirect stimulus but the response times were not significantly different between the two experimental conditions.

Duration was expected to be longer in the indirect condition, compared to the direct condition, as the experience in the direct condition would be driven by the availability of the stimulus that triggered the nostalgic experience, i.e., it would last about as long as the stimulus was available and the experience in the indirect would presumably be driven by pertinent individual-difference factors. The duration was found to be significantly shorter in the indirect condition than in the direct condition. However, the range of duration was quite wide; in the indirect condition, it was as large as three minutes and in the direct condition it was about one and a half minutes.

4.2.2 Intensity

The maximum and average intensity levels obtained from the Slider data indicated the intensity and variation of the nostalgic process function. The descriptive statistics for the intensity and variation parameters are given in Table 4.4. The results of maximum and average intensity levels, thus, showed that the nostalgic experiences were more intense when triggered by a direct stimulus than when elicited by instructions. An independent *t*-test analysis between the two experimental conditions showed that the maximum intensity levels ($t(330) = -2.233, p < 0.05$) and the average intensity levels ($t(331) = -2.570, p < 0.01$) were significantly different between the conditions. A strong positive correlation was also observed between the maximum and average intensity level ($r = 0.890, p < 0.01, N = 363$). The results of maximum and average intensity levels, thus, showed that the nostalgic experiences were more intense when triggered by a direct stimulus than when elicited at will.

Table 4.4. Descriptive Statistics for Intensity and Variation in the Two Experimental Conditions.

Variable	Sample	Mean	SD	Range	N
MIL	Indirect	0.75	0.31	0.008–1.060	220
	Direct	0.82	0.28	0.093–1.066	143
AIL	Indirect	0.52	0.24	0.005–1.012	220
	Direct	0.58	0.22	0.089–0.947	143
MIL:AIL	Indirect	1.50	0.36	1.001–3.199	220
	Direct	1.46	0.38	1.009–3.947	143

MIL—maximum intensity level, AIL—average intensity level, Ratio of MIL:AIL—ratio of maximum intensity level to average intensity level, RT—response time.

The intensity of the state nostalgic experience was also measured on a 7-point Likert scale, where ‘1’ indicated a ‘very weak’ experience, ‘4’ indicated an experience that was ‘as strong as most other nostalgic experiences’ that the participant has had and ‘7’ indicated ‘one of the strongest nostalgic experience’ they have had.

In the indirect condition, the mean reported intensity of the state nostalgic experience was 4.4 (Median = 4, SD = 1.44, Range = 1–7, N = 220). The mean reported intensity for the direct condition was 3.9 (Median = 4, SD = 1.19, Range = 1–6, N = 143). Experiences in the indirect condition were thus more intense than that in the direct condition ($t(342) = 3.61, p < 0.01$). In the indirect and direct conditions, respectively, 22% and 37% had an experience that was weaker than the usual intensity of their nostalgic experiences (i.e., less than a score of 4 on the Likert scale), 32% and 30%, respectively, had an experience of an intensity similar to that of their usual nostalgic experiences (a score of 4), and 46% and 33% had an experience more intense than their usual experiences (a score greater than 4). Overall (across both experimental conditions), the intensity of the nostalgic experience reported on the Likert scale, correlated positively with the process function parameters that measured the intensity

of the experience, i.e., maximum ($r = 0.289, p < 0.01, N = 363$) and average intensity levels ($r = 0.320, p < 0.01, N = 363$).

The nostalgic experiences were expected to be more intense in the indirect condition. The maximum and average intensity levels of the nostalgic process function were higher in the direct than in the indirect condition. However, the experiences were rated to be more intense in the indirect than in the direct condition, when compared to one's general nostalgic experiences.

4.2.3 Variation

The ratio of the maximum to average intensity level gave an estimate of the variation in the nostalgic process function (Table 4.4). The lower the ratio of the maximum to average intensity level, the less peaked and varied was the nostalgic process; the higher the ratio, the more peaked and varied was the nostalgic process. The nostalgic process function was expected to show a lower variation in the indirect condition but no significant difference was observed between the two experimental conditions.

A negative correlation was observed between the average intensity level and the ratio of MIL and AIL ($r = -0.345, p < 0.01, N = 383$). That is, a higher average intensity of nostalgic experience (higher AIL) was more likely to be constant in intensity and likely to be less peaked and varied (lower MIL:AIL).

4.2.4 Age at Event

When asked to recall an event that makes them feel nostalgic (indirect condition), on average, the time-period that most people were nostalgic about was their teenage years, i.e., when they were about 14 years old ($SD = 6.7$ years, $Range = 2-34$ years, $N = 240$). For the direct condition ($N = 290$), when a cue was provided in the form of music for a particular time-period (from both, 7–10 years and 13–16 years), overall the time-period for which the participants got nostalgic were the early teenage years ($Mean = 13.4$ years, $SD = 4.05$ years, $Range = 4-27$ years). No significant difference was observed between the indirect and direct

conditions. There was a moderate positive correlation between the participant's present age and the age of the event recalled ($r = 0.322, p < 0.01, N = 389$). Further analyses between the two target time-periods are discussed in the last section of this chapter (Section 4.4).

4.2.5 Age of Memory

In the indirect condition, the average age of memory was 9-years old ($SD = 7$ years), i.e., on average the memories recalled occurred nine years before the testing time-point. The oldest memory recalled was 30-years old and the youngest recalled memory was 1-day old. In the direct condition, the average age of memory was 7-years old ($SD = 5$ years) from the present time-point. The oldest memory recalled was 27-years old and the youngest recalled memory was 1-day old. The difference between the two experimental conditions was significant, $t(369) = 2.047, p < 0.05$.

4.2.6 Association between Different Process Parameters

Response Time and Duration. In the indirect condition, a moderate positive correlation was observed between response time and the duration of the experience ($r = 0.396, p < 0.01, N = 220$); no significant relationship was observed in the direct condition. Those who took longer to find an event, i.e., in the indirect condition, also spent a longer time having the nostalgic experience. However, when the event was elicited by an external stimulus, this relationship disappeared.

Response Time, Intensity and Variation. When nostalgia was elicited by an external stimulus, the faster the stimulus elicited an event, the stronger was the experience. In the indirect condition, a small negative correlation was observed between the average intensity level and response time ($r = -0.133, p < 0.05, N = 220$), and a small positive correlation was observed between response time and the ratio of maximum to average intensity level ($r = 0.161, p < 0.05, N = 220$). In the direct condition, a small negative correlation was also observed between response time and the maximum ($r = -0.185, p < 0.05, N = 143$) and the

average intensity levels ($r = -0.179, p < 0.05, N = 143$), and the rated intensity ($r = -0.185, p < 0.05, N = 143$).

Thus, in nostalgic experiences elicited by an indirect stimulus, a shorter response time was associated with greater average intensity and less variation; and in experiences elicited by a direct stimulus, a shorter response time was associated with a greater average intensity of experience.

Response Time, Age of Event and Age of Memory. The older a memory was, the longer it took to feel nostalgic about, in the absence of a direct physical stimulus to elicit the memory. The remembered event time-point (bump) showed a negative correlation ($r = -0.165, p < 0.05, N = 152$) with the time it took to recall an event (response time) in the indirect condition but did not show any correlation in the direct condition. Similarly, a positive correlation was observed between response time and age of memory ($r = 0.196, p < 0.01, N = 177$) in the indirect condition.

Duration, Intensity and Variation. As expected, a positive correlation was found between perceived intensity and duration of the nostalgic experience, i.e., the more time spent being nostalgic, the greater the likelihood of experiencing a more intense nostalgia—as measured through the maximum intensity level ($r = 0.328, p < 0.01, N = 220$, in the indirect condition; $r = 0.235, p < 0.01, N = 143$, in the direct condition) and through the average intensity level ($r = 0.289, p < 0.01, N = 220$, in the indirect condition; $r = 0.240, p < 0.01, N = 143$, in the direct condition). A moderate positive correlation was also observed between the duration of the nostalgic experience and the rated-intensity (measured on a 7-point Likert scale) of the experience ($r = 0.266, p < 0.01, N = 220$), in the indirect condition; however, no correlation was observed in the direct condition.

A negative relationship was expected between the variation in the nostalgic process and the duration of experience, i.e., the more time spent being nostalgic, the more prolonged and

mellow the nostalgic experience, consequently the lower the ratio of MIL:AIL. However, no significant correlation was observed.

Duration and Age at Event. The remembered event time-point (age at event) did not show any correlation with duration of the nostalgic experience, in the indirect condition. In the direct condition, the longer back the remembered event had occurred, the longer was the duration of the experience ($r = 0.363$, $p < 0.01$, $N = 128$), and the older one was when the recalled event had occurred, the shorter was the duration of the event experience ($r = -0.170$, $p < 0.05$, $N = 137$).

4.3 The Event Characteristics

In this section, results on the cognitive aspects of the event components are discussed. The different categories for most event characteristics were objectively different and as such were coded during data collection, except for two event characteristics—the event type and the event activity. These two characteristics were coded during data analyses. An inter-rater reliability analysis was initially conducted on a subset of the data (20 participants). In the first round, the two raters agreed on the coding of the event-type analyses 85% of the time and agreed on the coding of the event-activity analyses 95% of the time. The raters assessed the points of differences and came up with more precise definitions for the categories, before conducting a second round of inter-rater reliability on a different subset of the data (another set of 20 participants). The raters agreed on the event-type coding 100% of the time and agreed on the event-activity coding analyses 95% of the time. Given this agreement, I used this coding scheme myself for coding the rest of the data.

During the recall of nostalgic events, no restrictions were put on the number of events that the participants could recall, however, in the analyses of event characteristics described in this thesis work, only the first event recalled was used. The next section describes the type and count of events recalled. Examples of event characteristics provided in this thesis work are those recalled and reported by participants in the course of the experiment.

4.3.1 Event Specifications

4.3.1.1 Type and Number of Events Recalled

The event types measure differentiated the recalled events on their specificity—broad and inclusive of many events that followed a common theme, or narrow and pertaining to a specific event.

Thematic events were defined as *events that had the same underlying theme, e.g., home/childhood/schooldays/a person/a place, etc., where the theme itself was the main focus*. There could have been different activities mentioned within this theme, or there could just be a mention of the theme itself. For example, ‘home’ could be a thematic event, with activities like ‘eating dinner/watching TV’ being mentioned, or it could just be a mention of ‘home’ with only a mention of ‘a view of the ‘house/kitchen/yard/driveway’, etc. and no mention of activities. It could also be a combination of ‘activities’ and ‘visual images’.

Specific events were defined as *a singular event that could have been either a one-off event (e.g., ‘riding a rollercoaster’, encounter with a friend at airport, etc.) or a routine/repetitive one (e.g., ‘swimming’, ‘horse-riding’, ‘going to nana’s’, ‘meeting a friend’, etc.), where the focus was on the event itself rather than an underlying theme*. The event activity could be divided into different parts like ‘walking into the airport’, ‘coming across my friend’, ‘talking to him’, ‘saying goodbye’, etc.; however, these were parts that make up the same activity and not different events in themselves.

Specific events were further divided into three types—single specific, specific and discrete (i.e., when more than one discrete specific event was recalled) and extended (i.e., a specific event that took place over a short duration, e.g., a weekend, a month, or over the summer).

Specific and discrete events referred to the recall of *many different specific events that did not have the same underlying theme, and the events themselves could be a one-off or a routine/repetitive activity; the focus here was also on the events themselves but the*

distinguishing factor from a 'single specific' type of events would be that there were different and discrete activities mentioned. Therefore, in effect it would be many different 'specific' type events. The distinguishing factor from 'thematic' type of events would be that the different activities mentioned did not share the same theme. For example, there could be a mention of 'swimming' as an activity, followed by 'hanging out with friends', or 'going to a concert'.

Extended events refer to the recall of *different activities from a single specific event that occurred over a short, continuous duration like a couple of days/weeks/month, e.g., a holiday/a weekend activity/summer camp.* The distinguishing factor here would be that the event was encapsulated by a period of time. There could be many different and discrete activities, or there could be activities with a same underlying theme, but these occurred over and within a short period of time. For example, there could be different events like 'being in Berlin', 'being in Rome', 'being in Paris', all describing activities like 'on the bus', 'checking the tourist attractions', 'going to a pub' and so on, and all of it had occurred over a period of, say, one month. There could also be an event like 'working as a security guard at festival' which could have activities like 'arriving at the festival ground,' 'securing the premise', 'listening to the artists', 'seeing people have fun', 'minding them' and so on, and all of this occurred over a weekend. The extended events were classified as specific and not thematic because the recalled event was a *specific time-period* that stretched over a few days or weeks, and it was *not a general theme* of vacations or weekends (for example) that was recalled. Examples of the different event types are listed in Table 4.5.

Table 4.5. Examples of Different Event Types.

Event Type	Examples	
	Indirect	Direct
Thematic	home; grandparent's place	school balls; family road trips
Specific	saving an eel from a pool and releasing it in a creek	dancing around with friends in classroom during recess; watching the song being performed on a talent show on TV
Specific and Discrete	Christmas in a certain year, cousin's wedding, having lunch with grandma; playing with friends, spending time with grandparents, a certain day with Dad	hanging out with friends in primary school and singing the song, sitting around with flatmates and listening to the song, listening to music and dancing with friends in school in Year 12
Extended	three-week trip to Europe; a weekend festival	

The distribution of the type of events recalled in the indirect and direct conditions were thematic—27% and 9%, and specific—72% and 91%, respectively, $\chi^2 (1, N = 392) = 18.347, p < 0.01$; Phi = 0.216 (small effect), $p < 0.01$. So nostalgic events were more likely to be specific in nature, whether the event was elicited by a direct or indirect stimulus. However, thematic nostalgic events were more likely to be elicited by an indirect rather than a direct stimulus. Thus, the trigger for nostalgia was relevant to the event type recalled and the recall of nostalgic memories that followed a theme (focussed on a time-period, place or people) was more likely when nostalgia was elicited by the instructions than when triggered by music.

Among the specific events, 57% were a single specific event, 39% were specific and discrete and 4% were extended events, $\chi^2 (2, N = 312) = 26.378, p < 0.01$; Cramer's V = 0.291 (small effect), $p < 0.01$. The direct condition yielded a single specific event 73% of the time, and the indirect did so 45% of the time. However, an indirect stimulus led to the recall of more specific events that were discrete from the first, single-specific event recalled (49%

of the time), which was observed only 27% of the time in the direct condition. Counting the number of different events recalled when they were specific and discrete, showed that an indirect stimulus also led to the recall of a greater number of events. The maximum number of discrete events recalled in the indirect condition was 8 (5% of cases), whereas, in the direct condition it was 4 (2% of cases). Only 6% and 1% of the specific events were extended events, in the indirect and direct conditions, respectively.

It was expected that a greater number of thematic events would be recalled in the indirect condition. Most of the events recalled were specific rather than thematic, but the indirect condition led to a much greater recall of wider, thematic events than did the direct condition. The indirect condition led to a recall of a greater number of events than the direct condition. These differences imply a difference in the breadth of the nostalgic experience, i.e., when triggered by an indirect stimulus the nostalgic events were broader, more in number, and more thematic in nature than when triggered by a stimulus from the immediate environment.

4.3.1.2 Frequency of Event

Event frequency refers to how often the nostalgic event had occurred in the past. Being nostalgic about a novel, one-off event that one had experienced could have different implications to being nostalgic about a regular event from the past.

The events recalled were more likely to be routine/repetitive events (74%) than a one-off event (26%). A routine event included activities that took place on a regular basis—daily (e.g., going to school, recess at school) or weekly (sports), a repetitive event included less regular activities like going to one's grandparent's place. Half the participants (51%) recalled a specific instance of participating in these regular events along with the general feeling of it, but others (47%) reported recalling just the feeling of participating in these regular events without recalling a specific instance. A few (2%) recalled the feeling of a specific time-period

of life, a place, or a person with whom they had regularly interacted, without recalling any specific instance.

Thus, the recalled events generally were routine or repetitive events rather than novel, one-off ones. No significant differences in event frequency were observed between the two experimental conditions.

4.3.2 Content of Event Recalled

The qualitative content of the events recalled was analysed in terms of location, characters, event setting and affective tone, to see if there were common features of nostalgic events and to observe how these differed with the type of stimulus that elicits the recalled event.

4.3.2.1 Location of Event—Place (City/Town) and Locality

Most of the events (92%) recalled by the participants took place in their hometown or another city or town that they either resided in or visited frequently (72% in hometown, 18% in a different city or town of residence or one that was visited frequently, and 2% in a combination of both). Only 8% of events took place in a novel city or town that the participants had visited only once, on a vacation or for a work or competitive event. A direct stimulus elicited events that took place in frequently visited places (95%) slightly more than the indirect stimulus did (90%) but the difference was not significant ($p < 0.10$).

Table 4.6. Examples of Different Event Locations.

Event Location	Examples
Place: Hometown/frequently visited town	hometown; town where aunt lives
Place: Other town/city	a town visited for music competition; vacation destination
Locality: Frequently Visited	home; school; park; friend's house; night club; school playground; bookshop; ice-cream parlour
Locality: Not-Visited Frequently	a restaurant; a certain street

With regards to locality in the town or city, 90% of the events took place in a familiar locality or one that was frequently visited (27% in home; 3% in neighbourhood; 1% on daily route; 18% in school/college/university; 1% in work place; 10% friend's or relative's house; 3% en route in a car; 13% in a public place like a street, a shopping mall or a playground; and 14% in a combination of these categories), and 10% of events took place in a locale that was not often visited by the participants. A direct stimulus elicited events that took place in frequently visited locales (95%) slightly more often than the indirect stimulus did (88%); ($N = 237$ for the indirect condition and $N = 148$ for the direct condition), $\chi^2(1, N = 385) = 4.894$, $p < 0.05$; $\Phi = -0.113$ (small effect), $p < 0.05$. Examples of the different event locations are listed in Table 4.6.

Thus, the locations of the nostalgic events were mainly one's hometown or a town/city that one had resided in or visited frequently rather than a novel place that was visited on a vacation or for work-related matters. Furthermore, within one's hometown, these events were likely to have taken place in locales one had visited frequently rather than novel locales. The event locations did not significantly differ between the two experimental conditions, or with age.

4.3.2.2 Characters—Count and Clarity

Most event characters (91%) involved loved ones, like family, relatives, friends or partners (42% of these involved friends/partners, 40% involved family/relatives and 9% involved a combination of both), while only 9% of the recalled events did not involve any loved ones (5% involved only the participants themselves, 3% involved acquaintances or unknown people and 1% involved pets or other animals).

Significant differences were observed between the two experimental conditions; $\chi^2(5, N = 390) = 63.162$, $p < 0.01$; $\Phi = 0.402$ (medium effect), $p < 0.01$. More events involving only the participants themselves were elicited in the direct (9%) than in the indirect (3%) condition. A greater number of events involving friends/partners were found in the direct

condition (59%) than in the indirect (36%) condition, and more events involving family/relatives were observed in the indirect (44%) than in the direct condition (22%). The remaining events from the indirect and direct conditions, respectively, involved a combination of friends/partners/family/relatives (13% and 6%), acquaintances/unknown people (3% and 3%) and pets/other animals (1% in each). A small proportion of the characters included people (a friend or family member) who have died (15 out of the total 397 participants, including both conditions).

These differences in distributions between the two conditions might be a result of the type of direct stimulus used to elicit the experiences, i.e., popular music, which was probably originally heard more while the participants were listening to the music by themselves or during social interactions with peers, rather than with family.

On average, the events included about 7 characters ($SD = 9$ characters) (including the participants themselves); no significant difference in number of characters was found between the experimental conditions. The minimum number of characters recalled could be considered to be zero, as in the indirect condition, in some cases no particular event was recalled but rather simply the feeling of being in a place (e.g., 'old home') was recalled. The maximum number of characters recalled was 40 in the indirect condition and 125 in the direct condition; however, these characters were all in the background and the participant gave an estimation of the approximate number of people that they visualised during their recall of the nostalgic event.

Thus, the characters in the events were mainly loved ones—friends and partners, followed by family and relatives but, at times, the characters involved just oneself, pets, unknown people and acquaintances. Some of the events pertaining to the loved ones included people who have passed away. In the direct condition, more events involving friends or partners were recalled and in the indirect condition, more events involving family or relatives were recalled.

4.3.2.3 Activity

The event activities were categorised as—leisure/hobby, social gatherings/interactions and routine activities.

‘Leisure/hobby’ activities were defined as *free-time activities or hobbies, including competitive events and events that one does regularly for fun and can possibly earn money from but is being pursued as a hobby and not work*, e.g., ‘listening to music’, ‘playing’, ‘gardening’, ‘being a tourist’, ‘driving around/being driven around on a tour’, ‘performing in a band’, ‘engaging in art and crafts for fun’, etc.

‘Social gatherings/interactions’ were defined as *activities involving planned social gatherings*, e.g., celebrating a birthday, a festival—cultural or religious, a school disco, a concert, a ball, a sleepover, *and social interactions with friends/family that were deliberate and planned but were not part of a daily-routine or leisure*, e.g., ‘saying goodbye to family at the airport’, ‘meeting brother’s family for the first time’, ‘seeing mom at airport after a few years’, etc.

‘Routine’ activities were defined as *tasks one performs as a part of everyday life, including work, but which are not part of a resting period or free time in between work-related tasks*, e.g., ‘being in the shower while the music was playing’, ‘driving around/being driven around on the way to and back from school/work’, ‘going to the doctor/dentist’, ‘being at class/lecture’, ‘teacher being up at the front delivering the lecture’, ‘working at a farm’, etc.

Table 4.7. Examples of Different Event Activities.

Event Activities	Examples	
	Indirect	Direct
Leisure/hobby	hanging out in my room; chilling in the lounge	watching a talent show on TV; listening to the radio
Social gatherings/ interactions	Christmas at home/ at Nana's/ at aunt's place; a birthday party	a friend's/house party; partying at a club;
Routine Activities	having breakfast; taking a shower	in car on the way to school; walking to school

Most events recalled involved a leisure/hobby activity (79%), followed by a daily-routine activity (12%) and activities involving social gatherings (9%). No significant differences were observed between the two experimental conditions. Examples of the different event activities are listed in Table 4.7.

Thus, the nostalgic events were mainly about leisure or hobby activities, were sometimes routine activities and at times involved social gatherings. In the direct condition, more leisure or hobby activities were recalled and in the indirect condition, more daily-routine activities were recalled.

4.3.2.4 Setting

The time of the day when most recalled events took place were—10% in the morning, 40% in the afternoon, 10% during daytime (both morning and afternoon), 17% during the evening or at night, 7% all throughout the day, and 17% occurred at different times of the day or there was no fixed time when the event generally occurred. Significant differences were observed between the two experimental conditions; $\chi^2 (2, N = 390) = 8.499, p < 0.05$; Cramer's $V = 0.14$ (small effect), $p < 0.05$. The indirect stimulus led to the recall of more events that took place in the morning (11% and 7%, respectively) and daytime (12% and 5%, respectively), all throughout the day (10% and 1%, respectively), or at different times of the

day (18% and 14%, respectively). However, the direct stimulus when compared to the indirect stimulus, led to the recall of more events that took place in the afternoon (50% and 35%, respectively) or during the evening/night (23% and 14%, respectively).

The seasonal distribution of events recalled was as follows—28% in summer, 15% in winter, 9.5% in spring, 8.5% in autumn, 1% in monsoon, 21% all throughout the year and 11% in different seasons of the year. For the remaining 6% of events recalled, participants could not recall the season 3% of the time, could only recall that it was a warm, sunny day 1% of the time and 2% of events took place in a tropical country with no seasons. Considering only the four main seasons, 46% took place in summer, 24% in winter, 16% in spring and 14% in autumn. Mean comparisons were not considered as the variable had too many categories to obtain any meaningful result. Most events took place indoors (41%), some took place outdoors (28%), 4% took place in a vehicle and 27% took place in a combination of these.

Thus, the nostalgic events were most likely to have taken place in the afternoon and during summer. The indirect stimulus led to a relatively greater recall of events that took place in the morning and the direct stimulus led to a greater recall of events that took place in the afternoon, evening or overnight.

4.3.2.5 Event Affective Tone

The affective tone of the recalled events was mostly positive (78%), sometimes negative (12%), at times neutral (4%) and at times a mixture of both positive and negative affect (7%). More events of positive affect were recalled in the direct condition as compared to the indirect condition (85% and 76%, respectively). In the indirect condition, as compared to the direct condition, more negative affect events 13% and 9%, mixed affect events 7% and 3%, neutral events 5% and 3%, respectively, were recalled; however, these differences were not significant.

Thus, the nostalgic *events* were mostly positive in tone but sometimes the recalled events were negative in nature, at times they were of mixed-affect and at other times they were neutral. The direct condition led to a relatively greater recall of positive events as compared to the indirect condition. The indirect condition led to a relatively greater recall of negative and mixed-affect events, as compared to the direct condition.

4.4 The State Experiential Nature of Nostalgia

State level measures of the experience of nostalgia involved the phenomenology of the nostalgic experience (measured by the Rubin scale) and the motivational intent and affective tone of the state nostalgic experience.

4.4.1 Phenomenology

4.4.1.1 Item Descriptions of the Rubin Scale Measures

The Rubin scale consisted of 14 items on the phenomenology of event recollection (see Table 3.4, Section 3.2.2). Thirteen of these items were measured on a 7-point Likert scale ('1'—'not at all', '3'—'vaguely', '5'—'distinctly', '7'—'as clearly as if it were happening right now'/'as much as any memory'/'as often as any event in my life'/'100% real'; see Method). One of the 14 items, i.e., the item on 'perspective', was categorical and was scored as either '1'—'own eyes', '2'—'observer, or '3'—'can't tell'. However, in this study, category '3' was described as 'both', as per reports from participants. The range of the obtained scores for all items varied from 1–7, except for the item 'see it in my mind', which achieved a range of 2–7 in the direct condition. The mean and SD of the scores obtained on the different items of the Rubin scale in the two experimental conditions (N = 241 for the indirect condition and N = 148 for the direct condition) are listed below (Table 4.8).

Table 4.8. Item Descriptions (Mean and SD) for the Two Experimental Conditions.

Item	Indirect (N = 241)		Direct (N = 148)	
	Mean	SD	Mean	SD
Real/Imagine**	6.06	1.145	5.55	1.039
Setting	5.85	1.351	5.99	1.16
Remember/Know	5.76	1.388	5.83	1.214
Spatial Layout	5.54	1.455	5.43	1.539
See	5.44	1.207	5.31	1.217
Back in time*	5.10	1.559	4.99	1.27
Reliving	5.04	1.425	5.12	1.37
Emotions	5.07	1.535	4.97	1.5
Coherent Story**	4.41	1.768	4.1	1.389
Rehearsal**	4.12	1.467	3.01	1.324
Hear**	3.93	1.759	4.78	1.369
Talk	3.07	1.935	3.07	1.935
In words**	2.17	1.540	1.78	1.087

*Indicates significant difference, $p < 0.05$; **indicates significant difference, $p < 0.01$; as per Student's t -test.

The items on 'hear', 'see', 'talk', 'spatial layout', 'emotions', and 'setting' measured the extent to which the event recollection involved these *sensory details* of the original event. Nostalgic experiences, therefore, included a strong visualisation and awareness of the event setting and spatial layout during event recollection, a high level of re-experiencing of the *emotions* from the original event and involved moderate levels of hearing in both conditions but slightly more so in the direct condition than the indirect one, as the former used music as a stimulus. However, the experiences were poor in recall of conversations that took place in the original event.

The item on ‘reliving’ measured the extent to which the event recollection involved reliving of the original event and the item ‘remember/know’ measured the extent to which the participants could actually remember the event and were not just reporting on their knowledge that the event had occurred in their past. Nostalgic experiences had a generally high level of *reliving* and *remembering*. About 41% remembered the events as clearly as if it were happening at that time (score 7), and only 3 participants (0.6%) reported that they could ‘not at all’ remember the event taking place (score 1). Thus, the strength of the event recall in nostalgic experiences was quite high.

Phenomenology scale scores were significantly different between the indirect and the direct condition, on the items—‘recalling events in words’ ($t(380) = 2.913, p < 0.01$), ‘recalling the event as a coherent story’ ($t(364) = 1.945, p < 0.05$), and ‘rehearsal’ ($t(335) = 8.178, p < 0.01$). The nostalgic experiences involved a strong sense of time-travel to the original event time-point, which was even stronger in the indirect than the music-direct condition, which might be because in at least some cases the music was still occasionally listened to, at time-points that were more recent. The events recalled during the nostalgic experiences were only moderately coherent, i.e., the event recall did not follow a linear pattern of a story with a beginning, middle and an end but were more discrete and random. The recall was more orderly for the indirect than the music-direct condition. This might be because the indirect stimulus led to the recall of events that were more rehearsed and, therefore, were more structured, while the music-direct condition led to the recall of events that were less rehearsed and less structured.

The events recalled during the nostalgic experiences were only moderately rehearsed overall, i.e., the events were recalled sometimes in the past but were not thought about all that often. The events recalled in the indirect condition were more frequently rehearsed than those in the music-direct condition. This might be because the indirect stimulus asked the participants to elicit nostalgia, and they were more likely to choose an event that was already

salient to them, as compared to events recalled in the music-direct condition, which might have been less salient in memory and more cue-driven.

For the item on perspective (own eyes/observer), 71% reported to have visualised the event from their own perspective, 16% visualised it from an observer perspective and 13% reported a back-and-forth between the two perspectives. No significant differences were observed between the two experimental conditions.

4.4.1.2 Comparison of Phenomenology of Nostalgic Experience with General Autobiographical Event Recollection

Rubin et al. (2003b) conducted a study on the phenomenology of autobiographical event recollection, using the above-mentioned scale to rate autobiographical memories. Table 4.9 compares the mean and SD of the phenomenology items for the nostalgic memories obtained in this study and those for the general autobiographical memories obtained in the 2003 study by Rubin et al. From the current study on nostalgia, only participants in the age range of 18–21 years, from the indirect condition were selected, to match the age of the participants in Rubin et al. (2003b).

Table 4.9. Rubin Scale Item Comparisons (Mean and SD) for Nostalgic Memory (Data from the Current Study) and General Autobiographical Memory (data from Rubin et al., 2003b).

Item	Nostalgic Memory (Overall) (N = 234)		General Autobiographical Memory (N = 55)	
	Mean	SD	Mean	SD
Reliving	4.95	1.36	4.83	0.80
Hear	4.22	1.64	4.23	0.96
See	5.28	1.19	5.37	0.72
Talk**	3.06	1.84	4.34	0.87
Emotions	5.03	1.44	4.65	0.91

Setting	5.92	1.80	5.85	0.75
Remember/Know	5.82	1.21	5.69	0.65
In words**	1.92	1.22	3.43	1.36
Back in Time	5.06	1.50	4.85	1.09
Coherent Story	4.15	1.62	4.49	1.06
Real/Imagine	5.78	1.10	5.75	0.72
Rehearsal	3.72	1.53	3.41	0.81

*Indicates significant difference, $p < 0.05$; **indicates significant difference, $p < 0.01$; as per Student's t -test.

As can be seen from the table above, the overall mean scores obtained from the two studies were quite similar for most items on the phenomenology scale. When considering the overall nostalgic memories (both direct and indirect), for most items, no significant difference was observed between the two studies. Only items on 'talk' ($t(287) = 5.0237, p < 0.01$) and 'in words' ($t(287) = 8.0772, p < 0.01$) were significantly different for the nostalgic and autobiographical memories from Rubin's study (see Table 4.9). This suggests that in nostalgic event recollection there is less involvement of linguistic components than in general event recollection, i.e., conversations are not recalled as such.

The Rubin et al. (2003) study used direct stimuli, but in a different modality altogether. Their study used the Galton technique (Galton, 1879; Crovitz and Schiffman, 1974), which uses cue words (e.g., 'candy', 'horse', 'mountain', 'church', etc.) to elicit autobiographical memories. That is, the study used visually presented, direct, verbal stimuli. Therefore, the phenomenology results from the Rubin et al. (2003) study should ideally be compared to the results from the direct condition of this study. However, the type of cue used in the two studies was qualitatively different and, therefore, is not suited for a direct parallel comparison. Additionally, it could be argued that the indirect condition is more of a match to the Rubin et al. study as it also used a visually presented verbal stimulus ("feel nostalgic

about something”), although not one that was as direct as a cue word that is expected to have a stronger link to an individual memory.

4.4.1.3 Item Correlations and Multiple Regression Analyses Predicting Belief and Recollection

Correlation coefficients between the 14 items are presented in Table 4.10 for all 389 participants. Correlations were also examined separately for the two experimental conditions. These varied slightly in magnitude but the directions remained the same for all correlations.

Table 4.10. Correlation Coefficients for the Phenomenology Items (*indicates significant correlation, $p < 0.05$; **indicates significant correlation, $p < 0.01$.)

	Reliv- ing	Hear	See	Talk	Layout	Emoti- ons	Setting	Reme- mber/ Know	In words	Back in time	Coher- ent Story	Real/ Imag- ine	Rehea- rsal
Reliving	1												
Hear	.305**	1											
See	.508**	.275**	1										
Talk	.251**	.422**	.164*	1									
Layout	.254**	.145**	.234**	.163**	1								
Emotions	.335**	.222**	.258**	.148**	.105**	1							
Setting	.192**	.085	.240**	.124*	.540**	.086	1						
Remember/ Know	.372**	.184**	.299**	.214**	.324**	.156**	.459**	1					
In words	-.040	.140**	-.009	.150**	.003	.060	.025	.033	1				
Back in time	.437**	.239**	.279**	.212**	.177**	.325**	.170**	.250**	.030	1			
Coherent Story	.318**	.299**	.319**	.218**	.241**	.250**	.213**	.351**	.110*	.292**	1		
Real/ Imagine	.208**	.132*	.208**	.169**	.216**	.171**	.214**	.349**	.057	.119*	.183**	1	
Rehearsal	.258**	.125**	.190**	.162**	.160**	.196**	.142**	.178**	.120*	.200**	.224**	.233**	1

The items on the Rubin Scale could be divided into two item categories—belief and recollection items, i.e., ‘reliving’, ‘travelling back in time’, ‘real/imagine’, ‘remember/know’, and the component process items, i.e., ‘hear’, ‘see’, ‘talk’, ‘spatial layout’, ‘emotions’,

‘setting’, ‘coherent story’, and ‘in words’. The component process items that characterise the sensorial aspects of the nostalgic process were used to predict the belief and recollection items, separately, for the two experimental conditions. Results from the two multiple regression equations calculated are shown in Table 4.11.

Table 4.11. Multiple Regression Beta Coefficients for the Indirect and Direct Conditions.

Indirect Condition									
Beta Weights for IV									
DV	See	Talk	Hear	Layout	Emotions	Setting	Coherent Story	Rehearsal	R²
Reliving	.46	.09		.11	.11			.12	.36
Back in Time	.20				.14		.15		.17
Real/Imagine	.17							.12	.12
Remember/ Know	.20					.34	.16		.35
Direct Condition									
Beta weights for IV									
DV	See	Talk	Hear	Layout	Emotions	Setting	Coherent Story	Rehearsal	R²
Reliving	.45				.24				.49
Back in Time	.19				.24				.34
Real/Imagine									
Remember/ Know						.37	.17		.28

*Only the significant Beta Coefficients are shown in the table, $p < 0.05$.

In the indirect condition, ‘see’, ‘talk’, ‘layout’, ‘emotions’ and ‘rehearsal’ entered into the prediction of ‘reliving’, whereas in the direct condition, only ‘see’ and ‘emotions’ entered into the prediction. Therefore, the memories that involved recollection of a conversation influenced reliving only during recollection of nostalgic events in the indirect condition but not in the direct condition. It is possible that these events were recalled *because* they included a salient and important conversation, as, overall, nostalgic experiences did not involve a lot of ‘talking’ (Mean = 3.34 and 3.07, respectively, for the indirect and direct conditions).

Rehearsal was also found to predict reliving only in the indirect and not the direct condition. This difference was expected and suggests that when the events recalled in the indirect condition were ones that were more rehearsed, they were likely to involve more reliving. Seeing was found to be the most important predictor for reliving, which was found to be equally important in both experimental conditions. Emotions were found to be more important in predicting reliving in the direct than in the indirect condition. The more emotional arousal involved in a nostalgic experience, the more does the experience include reliving of the event.

When predicting ‘back in time’, ‘see’ and ‘emotions’ entered into the prediction for both conditions, while ‘coherent story’ entered into the equation only in the indirect condition. When an event recalled in the indirect condition is more coherent it enabled travelling back to the past. This might be because the event has a more concrete structure and, consequently, it stands out in memory, which allows for a more enhanced feeling of travelling back to a time in the past. Emotions were found to play a more important role in predicting travelling back in time in the music-direct condition than in the indirect one, whereas, seeing played an equally important role in both conditions.

As can be seen from the results discussed above, for both of the recollection items—‘reliving’ and ‘back in time’, ‘see’ and ‘emotions’ were important predictors. Similar results were observed for the general autobiographical memories in the Rubin et al. (2003b) study, but ‘in words’ was also found to be a predictor of reliving in general autobiographical memories.

For the belief item on ‘real/imagine’, ‘see’ and ‘rehearsal’ entered into the equation in the indirect condition, however, none of the component process items were found to significantly predict belief in the realness of the event recollected in the direct condition. The more that an event was rehearsed and the better it was visualised, the more certainty could be ascribed to the content of an event recalled during a nostalgic experience elicited at will. However, when the event recalled during a nostalgic experience was elicited by a direct

stimulus (music), belief in the reality of the event contents could not be predicted by the sensorial aspects of the event recollection, the emotions experienced during recollection, or the coherence of the event recollected. For ‘remember and know’, ‘setting’ and ‘coherent story’ entered into the equation in both conditions, while ‘see’ entered into the equation only for the indirect condition. Thus, visualisation might be important for an event being remembered rather than just being known only during a nostalgic experience that is elicited from within but not for one that is elicited by an external stimulus, especially one elicited by music. Recollection of event setting was found to be the best predictor of an event being remembered rather than known, which might be because recollection of event setting helps to better contextualise it. Coherence of the event story might help provide more context to the event recalled due to the improved event structure, which then further increases belief in the event remembrance.

The results observed on the belief items for the general autobiographical memories in the Rubin et al. (2003b) study show some similarity to those for the nostalgic memories studied here. Recollection of event setting and coherence of event story were found to be good predictors of belief in reality and remembrance of general autobiographical memories. Emotions were also found to be a relevant predictor of both belief items, where a negative relationship was observed between these items and the item on emotions. However, as can be seen from the results discussed above, emotional recollection was not found to influence belief in event recollection in the nostalgic memories, while seeing and rehearsal of the event were found to influence belief in recollection. Additionally, belief in nostalgic memories was also found to differ with the trigger (stimulus) for the nostalgic event, as has been discussed above.

4.4.1.4 Other Phenomenological Measures

Along with the measures on the Rubin Scale, the participants were also asked about some other relevant aspects of the nostalgic experience.

4.4.1.4.1 Character Identification

In almost all events that involved other people, the characters were identified (99%), but in 1% of events, the characters involved were in the picture but were ‘only a blur’ and the participants did not know who they were. However, although the characters were usually identified, this often involved only a knowledge of who the characters were and that they were present in the event rather than a focus on the characters themselves. On average, 3 out of the 7 characters reported as present were visualised in the course of the nostalgic experience and the rest were a blur but in the scope of the visual sketchpad. Participants were also asked about the background characters. Half the time (50%), there were no background characters at all, 36% of the time the background characters were thought about during the state nostalgic experience and 14% of the time these characters were only recalled when asked by the experimenter. When there were background characters, they were identified in 53% of memories and were just a blurry shape in the background in 47%.

4.4.1.4.2 Imagery of Event

Visualised as Pictures/Videos. Participants ($N = 309$) were also asked if their visual imagery of the recalled event activity was seen as a picture/slideshow of pictures or as a video/a few video clips. Most imagery involved pictures (51%), followed by video (40%) and a combination of both (9%). Significant differences observed between the two experimental conditions; $\chi^2(2, N = 309) = 8.987, p < 0.01$; Cramer’s $V = 0.171$ (small effect), $p < 0.01$. The imagery in the direct stimulus condition (55%) contained more disjointed pictures than in the indirect stimulus condition (45%). Conversely, the imagery was more connected and seen as a flowing sequence, i.e., as a video in the indirect condition (60%) as compared to the direct music condition (40%).

Visualised in Colours. On a seven-point Likert scale, the visual image was reported to have been distinctly visualised in colours, on average ($M = 5.47$), where 37% reported that

the colours were ‘as clear as if it were happening now’ (score ‘7’) and 4% reported not seeing any colours at all (score ‘1’).

Objects in the Background. The visual image also included background objects most of the time. A mean of 4.67 was obtained on a seven-point Likert scale, where 17% recalled background objects ‘as clearly as if it were happening now’ (score 7) and 4% did not recall any background objects (score 1). Significant differences were observed between the two experimental conditions ($N = 179$ for the indirect condition and $N = 148$ for the direct condition), $t(309) = 1.925$, $p < 0.05$, where background objects were more clearly recalled in the indirect condition.

4.4.1.4.3 Other Sensory Experiences Recalled

Descriptions of event activities were sometimes (9%; 42 out of 487) accompanied with recollections of sensory experiences that were not in the visual modality. Of the other modalities recalled—12% was auditory, 10% was olfactory, 2% was tactile, 69% was of a feeling of being in a place or with someone and 7% was a combination of these. Examples of other sensory recollections of event activities are listed in Table 4.12.

Table 4.12. Examples of Different Sensory Experiences Recalled.

Sensory Modality	Examples
Auditory	advice given by parents
Olfactory	smell of Nana’s room
Tactile	feeling of being in a place; feeling of being with ex-partner

4.4.2 Affective Tone of the State Nostalgic Experience

The affective tone of the state nostalgic experience (not the original event) was mostly positive (66%), sometimes mixed (25%) and at times negative (9%). Significant differences

were observed between the two experimental conditions; $\chi^2 (2, N = 332) = 9.839, p < 0.01$; Cramer's $V = 0.172$ (small effect), $p < 0.01$. More state nostalgic experiences contained positive affect in the direct as compared to the indirect condition—75% and 58% positive affect. In the indirect condition as compared to the direct condition, the experiences were more likely to contain mixed affect (31% and 19%, respectively) and negative affect (11% and 7%, respectively).

Thus, the nostalgic *experiences* were mostly positive in tone, followed by mixed-affect and negative tones. The experiences in the direct condition were more positive than in the indirect; and the experiences in the indirect were more mixed and more negative in tone than in the direct condition.

4.4.3 Motivational Intent Expressed in the State Nostalgic Experience

The majority of the participants ($N = 264$) did wish to go back to the event they just recalled (63%), while the rest (37%) did not. Of the ones who did not wish to go back to the event some reported that they missed the past time but did not wish to go back to it (13%) while the others did not 'miss' the past time at all when they were nostalgic but were simply reliving the event (24%). Significant differences were observed between the two experimental conditions when considering the ones that wished to go back to the event, the ones who missed the past but did not wish to go back and the ones who just wished to relive it in mind, $\chi^2 (2, N = 264) = 41.381, p < 0.01$; Cramer's $V = 0.396$ (moderate effect), $p < 0.01$. In the direct stimulus condition, 65% wished to go back, 2% missed the past but did not wish to go back to it and 33% wished only to relive the event in mind; while in the indirect condition, 60% wished to go back, 27% missed the past but did not wish to go back to it and 13% wished only to relive the event in mind.

Thus, it appears that when the nostalgic experience was triggered by an external stimulus, the motivation to go back was slightly stronger than when nostalgia was triggered by instructions. The indirect condition led to a greater motivation of not wishing to go back to

the event even though the component of *missing* it was present, which was significantly lower in the music-direct condition where if the motivation to go back was absent, then the motivation that was present was to simply enjoy reliving the event in mind without going back to it. The motivation to just relive the event in mind was also present in the indirect condition but when there was a lack of motivation to go back to the past, there was an almost equal presence of *missing* the past without wishing to go back and wishing to relive the event in mind without wishing to go back and without missing it.

Experiential Affect and Motivation. When the nostalgic experience was positively toned and contained mixed affect, a stronger motivation to go back to the event was shown (61% and 70%, respectively) and when the experience was negatively toned, half the times there was a motivation to return to the event (50%) and in the other half there was no motivation to go back to the event; $\chi^2 (2, N = 264) = 3.255, p < 0.01$; Cramer's $V = 0.111, p < 0.01$.

4.4.4 Associations between the Experiential Nature and Other State Nostalgia Components

Affect, Motivation and Intensity of Experience. Negatively-toned nostalgic experiences were rated to be the most intense (as reported on a 7-point Likert scale) ($M = 4.8$, $SD = 1.8$), followed by experiences containing mixed affect ($M = 4.6$, $SD = 1.4$) and positively-toned experiences ($M = 4.2$, $SD = 1.3$). Rated-intensity of state nostalgic experience differed significantly with the affective tone of the experience, $F(2, 329, N = 331) = 4.177, p < 0.05$. At times (for four cases in each experimental condition) participants had negative and mixed affect experiences that were so intense that it reduced them to tears.

When the nostalgic experience was characterised by a motivation to return to the past, the experiences were reported to be significantly more intense ($M = 4.5$, $SD = 1.3$) than when there was a lack of motivation to return to the past event ($M = 4.0$, $SD = 1.5$), $F(1, 262) = 9.585, p < 0.01$.

Affect and Motivation of the State Nostalgic Experience and Affective Tone of the Nostalgic Event. Positively toned events ($N = 257$) were mostly accompanied with a positively-toned nostalgic experience (39%), followed by a mixed-affect experience (28%), however, in some cases positive events evoked negative (3%) experiences. Negatively-toned events ($N = 41$) mostly elicited a negative experience (54%) but often elicited positive experiences (37%), and at times elicited mixed experiences (10%). Neutral events mostly elicited positive experiences (93%), and at times elicited mixed experiences (7%). Events that were of mixed affect elicited positive experiences most of the time (60%) and at other times elicited mixed-affect experiences (40%). Significant associations were observed between the affective tone of the event and the experience; $\chi^2(6, N = 332) = 118.854, p < 0.01$; Cramer's $V = 0.423, p < 0.01$.

The associations between *experiential motivation* of the state nostalgic process and the *event affect* and were not as pronounced as that between the former and *experiential affect*. Positive and neutral events were more likely to be associated with a motivation to return (66% and 58%, respectively), negative events were more likely to be associated with a lack of motivation to return the event (53%), while mixed affect events showed equal motivation to return (50%) and not (50%), but the differences were not significant.

4.5 Analyses of the Direct Stimulus Condition State Nostalgic Process for the Two Target Periods—Childhood and Teenage Years (Between-Block Analyses)

This section presents results on comparison of nostalgia elicited by the direct (music) stimulus from two different time-periods of life—childhood and teenage years. A between-block analysis was done for the two target periods, i.e., childhood and teenage years, from which music were played. This involved within-subject analyses on a sample of 156 participants, and between-subject order-effect analyses.

No significant difference was observed between the state nostalgic experiences for events evoked by music from childhood and music from teenage years. The only difference

observed was in the *age at event*, which was directed through the songs used in the experiment and thus was not really an observed effect. However, although the songs used in the experiment were selected from two age blocks (7–10 years and 13–16 years) with no overlap and a difference of 3 years between the blocks, since the songs from the childhood years were also available to them during their teenage years, often the events recalled in this experimental block were from their teenage years rather than from childhood. As a result, the mean age at event recalled for childhood songs was 13 years ($SD = 5$ years) and that of songs from teenage years was 15 years ($SD = 3$ years); $t(134) = -6.010, p < 0.01, N = 135$. This might also explain why no significant differences were observed for any other state nostalgia parameters observed for the two time-periods of life.

4.6 Summary of State Level Analyses

The nostalgic experiences elicited by the two triggers—instruction and music—were found to differ at the state level. The experiences varied in terms of the observed process parameters, event characteristics and affective and motivational natures. The study provides first evidence for the cognitive, affective and motivational operational natures of nostalgia. The study also showed that the affective and motivational natures of nostalgia varied with the stimuli that elicited it, which provides a possible answer for the conflicting evidence of nostalgic affect found in the literature. The implications of the study findings are further discussed in Chapter 6, in the context of the main research questions.

5 Chapter 5: Study 2—Experimental Analyses of State Nostalgia in Terms of Individual Factors and the Trait Experiential Nature of Nostalgia

As discussed in Chapter 3, Study 2 was designed to look at the state and trait level differences in the nostalgic process. This chapter presents the results of the differences in nostalgia due to trait level factors—individual-difference factors and trait experiential nostalgia.

The existing literature briefly examined the associations between individual-difference factors like age, gender, life satisfaction and culture with nostalgia proneness. However, as discussed in the context of the literature review (Chapter 1) and research questions (Chapter 3), the relationships between these variables often yielded conflicting results. Therefore, this study additionally examined the associations between these individual-difference factors and the different components of the state nostalgic process (described in Chapter 4), when elicited by an indirect (instructions) stimulus. The state nostalgic process examined nostalgic affect and motivation for only one instance, i.e., nostalgia elicited by the particular stimulus and the event recall that it led to. Therefore, the study also observed the nature of nostalgic affect and motivations (trait experiential nostalgia) at the trait level, and the associations between trait experiential nostalgia and individual-difference factors. This would provide insight into the nature of general nostalgic experiences and how these vary among individuals.

The first section of this chapter discusses the results pertaining to differences in the state nostalgic process, as a result of the individual-difference factors. The second section of the chapter discusses the trait experiential nature of nostalgia in terms of affect and motivation, its relation to other individual-difference factors and its influence on state nostalgia. As in Chapter 4, the results of state nostalgic processes are again discussed in the context of the three main constructs of the research study—the process parameters, the event characteristics and the experiential nature.

The sample for the analyses on the influence of individual difference on the state nostalgic process was slightly different from that used in the between-experimental condition analyses (discussed in Chapter 4) as it included a wider age range.

5.1 Sample for Trait Level Analyses

The sample source and sampling technique and the exclusion criteria were the same as described in Chapter 4. However, the inclusion criterion differed in terms of age, as participants older than age 35 years were included for the trait level analyses. The sample contained individuals in their late teens to those in their late seventies; 71% females and 29% males. The mean age of participants was 31 years ($SD = 16$ years, Range = 18–79, $N = 331$).

5.2 Individual Factors

In this section, the influence of *individual-difference factors* on the *state nostalgic process* (i.e., nostalgia as it operates when elicited by a stimulus), as observed in the indirect instruction condition, is discussed. The results on the differences observed in the examined components of the state nostalgic process is listed in the context of each individual difference factor. These factors include age, gender, place of living, nostalgia-proneness, life satisfaction and culture (see Chapter 3, Sections 3.1.4 and 3.2.2 for details).

5.2.1 Age and Gender

Process Parameters. It was expected that the older participants would take a much longer time to feel nostalgic about an event and would experience nostalgia for a longer duration than the younger ones when asked to feel nostalgic about the past, as they would have had a much larger reservoir of events to choose from. However, no significant correlation was found between age and response time or duration of a nostalgic experience.

The nostalgic experiences were expected to be more intense and less varied for older individuals. A weak positive correlation was observed between age and intensity of nostalgia,

as reported on the seven-point Likert scale, $r = 0.123$, $p < 0.05$ and no significant influence of age on variation was observed.

When asked to recall an event that makes them feel nostalgic, on average, the time-period that most people were nostalgic about was their teenage years, i.e., when they were about 16 years old (Mean = 16.4 years, Median = 15 years, SD = 9.74 years, Range = 2–68 years, $N = 324$). For participants below the age of forty ($N = 255$), the mean age for which they were nostalgic was 14.5 years (Median = 14 years, SD = 7.1 years). For participants above the age of forty ($N = 73$), the mean age for which they were nostalgic was 22.8 years (Median = 20 years, SD = 14.3 years). A significant positive correlation was observed between age and age at event ($r = 0.450$, $p < 0.01$, $N = 324$). Considering the whole age range sampled in the study (18–79-years old), the average age of memory was 15 years (SD = 14 years). The oldest memory recalled was 68-years old (i.e., one that had occurred 68 years ago) and the most recent memory was 1-day old. A significant positive correlation was also observed between age and age of memory ($r = 0.784$, $p < 0.01$, $N = 324$).

Gender difference was only observed in the rated-intensity of the nostalgic experience $t(329) = 1.971$, $p < 0.05$, where females reported a more intense nostalgic experience on a seven-point scale (a score of 5) than males (a score of 4); no significant difference was observed in the maximum and average intensity levels of the nostalgic process function.

Thus, older participants recalled nostalgic events that had occurred at a later time-point in their lives, yet they tended to recall older memories (i.e., more temporally distant from the present) than their younger counterparts. Older and female participants were also more likely to have stronger nostalgic experiences.

Event Characteristics. Thematic-type events ($M = 35$ years, $SD = 17$ years) tended to be recalled more by older participants and specific-type events ($M = 30$ years, $SD = 13$ years) tended to be recalled more by younger participants, $t(329) = 3.034$, $p < 0.01$. A

negative correlation was observed between age and the number of events recalled, $r = -0.207$, $p < 0.01$, $N = 331$.

Younger participants tended to recall more events involving friends and partners ($M = 29$ years, $SD = 13.2$ years) as event characters and with increasing age the event characters tended to involve family and relatives ($M = 33$ years, $SD = 17.1$ years) and only the self ($M = 37$ years, $SD = 18$ years); $F(2, 276) = 3.427$, $p < 0.05$, $N = 278$.

Younger participants tended to recall more events involving leisure or hobby activities ($M = 29$ years, $SD = 14$ years) and with increasing age the events tended to involve social gathering activities ($M = 32$ years, $SD = 13$ years) and daily-routine activities ($M = 36$ years, $SD = 19$ years); $F(2, 280) = 4.967$, $p < 0.01$, $N = 282$.

Younger participants recalled more events that were *neutral* in affective tone ($M = 28$ years, $SD = 10$ years) and with increasing age the event affective tone tended to be of *positive* ($M = 31$ years, $SD = 15$ years), followed *negative* ($M = 33$ years, $SD = 17$ years) and *mixed* tone ($M = 37$ years, $SD = 17$ years).

Thus, as expected, older people were more likely to recall wider, more thematic nostalgic events, and, they also recalled fewer events, whereas younger people recalled more specific and discrete nostalgic events (i.e., they recalled numerous events pertaining to a specific activity rather than a wider theme with a recollection of the feelings associated with the various components of that theme). Event frequency did not show any association with age. With increasing age, the nostalgic events tended involved just the participant themselves or family members rather than friends or partners; involved daily routines of the past and social gatherings than leisure or hobby activities; and contained more negative affect, either in the pure form or in conjunction with positive affect. No significant difference in age was observed for the different event frequencies and event location (place and locality).

No significant gender difference was observed for event type, frequency, location and activity. Event characters were found to be significantly different between the two genders; χ^2

(2, $N = 279$) = 5.865, $p < 0.05$; Cramer's $V = 0.145$ (small effect), $p < 0.05$. Females recalled more events involving family/relatives (61.5%), followed by friends/partners (35%) and events only involving themselves (3.5%); whereas males recalled more events involving friends/partners (49%), followed by family/relatives (46%), and those involving only themselves (5%). Thus, females, as compared to males, recalled more nostalgic events that involved family/relatives and fewer events involving friends/partners.

Experiential Nature of State Nostalgia. The affective tone of the nostalgic experience (not the recalled event) did not show any significant difference with age; and the motivational intention to go back (or not) to the event did not show any significant difference with age or gender. Thus, contrary to what was expected, wishing to go back to the past was not greater in older individuals and in females. However, the affective tone of the nostalgic experience was found to be significantly different between the two genders; χ^2 (2, $N = 268$) = 9.011, $p < 0.01$; Cramer's $V = 0.183$, $p < 0.01$. Amongst females, the distribution of the affective tone of the nostalgic experience was as follows—55% positive, 11% negative and 34% mixed affect; amongst males, the distribution was—75% positive, 7% negative and 18% mixed affect.

Thus, females as compared to males experienced more mixed-affect nostalgia and lesser positive-toned nostalgia. Gender and age did not have an influence on the motivational nature of the experience.

5.2.2 Place of Living

The participants surveyed in the indirect condition had, on average, lived in 3.0 different places ($SD = 1.9$) (towns or cities, some including different countries). In the indirect condition, 12.4% of participants were living in a new hometown and 4.8% in a new home-country.

It was expected that those who were not living in their hometown/home-country would be more likely to recall events that took place in one's hometown/home-country but no

such difference was found. No significant associations were observed between place of living and any of the process parameters, experiential nature of nostalgia and all event characteristics except for one. Those who were not living in their home-country were found to recall slightly more events about social gatherings and fewer leisure or hobby activities than those who were. The event activity distribution for those who were not living in their home-country was as follows—63% leisure and hobby activities, 19% daily-routine activities and 18% social gathering activities. The event activity distribution for those who were living in their home-country was as follows—76% leisure and hobby activities, 16% daily-routine activities and 8% social gathering activities; $\chi^2(2, N = 281) = 6.041, p < 0.05$; Cramer's $V = 0.049$ (small effect), $p < 0.05$.

5.2.3 Nostalgia-Proneness

The possible score range on the Southampton Nostalgia Scale (SNS) is 7–49. A higher value indicates more nostalgia-proneness. The mean nostalgia-proneness in the indirect condition was 33.82 (Median = 35, SD = 9.005, $\alpha = 0.92$).

Females were significantly ($M = 35$, $SD = 8.84$) but slightly more nostalgia-prone than males ($M = 32$, $SD = 9.20$); $t(168) = 2.393, p < 0.05, N = 331$. The Indian sample showed a significantly greater ($t(121) = -2.492, p < 0.05, N = 271$) nostalgia-proneness (Mean = 36, $SD = 8.48$) than the NZ sample (Mean = 33, $SD = 8.71$). No associations were observed between nostalgia-proneness and age, life satisfaction and place of living.

Process Parameters. The nostalgic experiences were expected to be more intense and varied for the more nostalgic-prone individuals. A significant correlation was observed between nostalgia-proneness and intensity measured as the maximum ($r = 0.217, p < 0.01, N = 313$) and average intensity level of the nostalgic process function ($r = 0.232, p < 0.01, N = 313$). Nostalgia-proneness also correlated with the rated-intensity (on a 7-point Likert scale) of experience ($r = 0.294, p < 0.01, N = 330$).

Nostalgia-proneness was expected to be negatively correlated with response time. No significant correlation was observed between nostalgia-proneness and response time, duration and intensity variation.

Nostalgia-proneness was also not associated with age at event and age of memory. Thus, nostalgia-proneness was found to be associated with only the intensity of the experience measured both as process function characteristic and as a reported Likert-scale rating, but did not show any association with the other parameters of the cognitive process.

Event Characteristics and Experiential Nature of State Nostalgia. No significant association was observed between nostalgia-proneness and either the event characteristics or the affective tone of the state nostalgic experience. However, a significant association was observed between nostalgia-proneness and the motivational nature of the state nostalgic experience; as expected, those who wished to go back to the past were more nostalgically prone ($M = 36$, $SD = 8.61$) than those who did not wish to go back ($M = 32$, $SD = 9.9$); $t(141) = -2.329$, $p < 0.05$, $N = 198$.

An influence of nostalgia-proneness was observed on the phenomenological nature of nostalgia. Nostalgia-proneness was found to be positively correlated with most phenomenological measures of the sensory components processes of 'hear' ($r = 0.224$, $p < 0.01$), 'see' ($r = 0.197$, $p < 0.01$), 'talk' ($r = 0.176$, $p < 0.01$), 'emotions' ($r = 0.332$, $p < 0.01$), the extent to which the event involved was recalled as a 'coherent story' ($r = 0.124$, $p < 0.05$) and the frequency with which the event had been 'rehearsed' ($r = 0.344$, $p < 0.01$). It was also found to be positively correlated with the components of 'reliving' ($r = 0.274$, $p < 0.01$) and 'travelling back in time' ($r = 0.253$, $p < 0.01$), and the belief components of 'remember and know' ($r = 0.160$, $p < 0.01$) and 'really occurred' ($r = 0.172$, $p < 0.01$).

Thus, nostalgia-proneness did not seem to relate to the content of the event recalled but it did influence the phenomenology of the experience and shaped the motivational intention of that experience.

5.2.4 Life Satisfaction

Life satisfaction was measured on an eleven-point Likert scale; possible values ranged from 0–10; a higher value indicated a greater satisfaction with life, in general. The mean life satisfaction observed in the indirect condition was 6.88 (Median = 7, SD = 1.93 and Range = 0–10). A weak positive correlation was found between age and life satisfaction, $r = 0.167$, $p < 0.01$, $N = 264$. No significant associations were observed between life satisfaction and nostalgia-proneness, gender and culture.

Life satisfaction were expected to be positively correlated with response time and negatively correlated with intensity and variation of the nostalgic experience. It was expected that those less satisfied with life would recall a greater number of thematic events and would show a greater motivation to go back to the past during the state nostalgic experience, but no such associations were found. Life satisfaction did not show any significant correlation with any recalled event characteristics, the experiential nature of the nostalgic experience and the process parameters of response time, duration, age at event, age of memory, rated-intensity of the state nostalgic experience and the process function parameters of maximum intensity level. However, it did show a significant correlation with the average intensity level ($r = 0.141$, $p < 0.05$, $N = 249$) and the ratio of the maximum to the average intensity level ($r = -0.212$, $p < 0.01$, $N = 249$). Those who were more satisfied with life in general had a more constant and intense nostalgic experience than those with a lower life satisfaction.

5.2.5 Culture

Of the 331 participants in the indirect condition, 261 participants were studied in Christchurch, New Zealand and 70 participants were studied in Kolkata, India. However, the participants sampled in Christchurch comprised an international population and were not just restricted to New Zealanders. Therefore, in order to conduct an explicit cultural analyses on nostalgia, the NZ sample was restricted to only the participants who grew up in New Zealand or the ones who had been living here for 10 years or more and now consider it to be their

home. This winnowed down the NZ sample from 261 participants to 202, with a mean age of 32 years (SD = 18 years, Median = 22 years and Range = 18–79 years). The Indian sample had an age similar distribution with a mean age of 32 years (SD = 14 years, Median = 27 years and Range = 18–76 years). The gender distribution between the two samples was also similar—74% and 69% females and 26% and 31% males, respectively, for the NZ and the Indian sample. No significant difference (mean comparison) in age and gender was observed between the two samples.

The Indian sample showed significantly greater nostalgia-proneness (Mean = 36, SD = 8.481) than the NZ sample (Mean = 33, SD = 8.707); $t(121) = -2.492, p < 0.01, N = 271$. The average life-satisfaction was not significantly different for the two cultures.

The NZ sample contained people who have moved around more and lived in more places (Mean = 3.46, SD = 2.12, Median = 3, Mode = 3, and Range = 1–11) than the Indian sample (Mean = 2.09, SD = 1.16, Median = 2, Mode = 1, and Range = 1–7); $t(219) = 6.746, p < 0.01, N = 272$. The Indian sample, as compared to the NZ sample, was also more likely to be currently living in their childhood hometown (69% and 55%, respectively).

Process Parameters. The Indian sample as compared to the NZ sample (Table 5.1) was found to take double the time to feel nostalgic, i.e., response time ($t(69) = -2.605, p < 0.01, N = 247$); had a much longer nostalgic experience, i.e., duration ($t(84) = -4.667, p < 0.01, N = 247$); and also reported a much stronger nostalgic experience, i.e., rated-intensity on a seven-point Likert scale ($t(124) = -4.279, p < 0.01, N = 272$), but the intensity and variation of the process function did not significantly differ between the two cultures.

Table 5.1. Descriptive Statistics for Process Parameters for the Two Experimental Samples.

Variable	Sample	Mean	SD
RT	NZ	11.5	11.9
(in seconds)	Indian	24.2	38.6
Duration	NZ	124	125
(in seconds)	Indian	261	220
Rated-Intensity	NZ	4.36	1.4
(7-pt Likert scale rating)	Indian	5.17	1.4

No significant differences were observed between the two cultures in terms of age at event and age of memory. Thus, the Indian sample was found to have a longer, more intense nostalgic experience that was elicited faster than their New Zealand counterparts. However, these results could also possibly be accounted for by the higher nostalgia-proneness of the Indians compared to the New Zealanders. Analyses of covariance (ANCOVA) analyses showed that these associations were still significant after controlling for nostalgia-proneness.

Event Characteristics. The NZ sample recalled a greater proportion of specific (73%) than thematic events (27%), as compared to the Indian sample (59% specific and 41% thematic); $\chi^2 (1, N = 272) = 4.911, p < 0.05$; Cramer's $V = 0.134$ (small effect), $p < 0.05$.

The NZ sample recalled more events involving only themselves or acquaintances/unknown people (10%) than the Indian sample (3%); however, the majority of events for both samples involved loved ones, 90% for the NZ sample and 97% for the Indian sample; $\chi^2 (1, N = 272) = 3.852, p < 0.05$; Cramer's $V = 0.119, p < 0.05$. Among the events involving loved ones (friends, family, partners, etc.); the NZ sample recalled more events involving family and relatives (64%) than those involving friends and partners (36%), while the Indian sample recalled slightly more events involving friends and partners (52%) than

those involving family and relatives (48%); $\chi^2 (1, N = 218) = 4.082, p < 0.05$; Cramer's $V = 0.137, p < 0.05$.

The distribution of event activity in the NZ sample included 79% leisure/hobby activities, 7% social gathering activities and 14% daily-routine activities; while that in the Indian sample included 60% leisure/hobby activities, followed by 31% daily-routine activities and 9% social gathering activities. The event activities were found to significantly differ between the two samples, $\chi^2 (2, N = 233) = 9.024, p < 0.01$; Cramer's $V = 0.197, p < 0.01$.

The distribution of affective tone of the event recalled in the NZ sample was as follows—82% positive, 7% each negative and mixed-affect and 3% neutral; while that in the Indian sample was—51% positive, 34% negative and 7% neutral and mixed-affect, each. The affective tone of the event was found to be significantly different between the two samples, $\chi^2 (3, N = 228) = 35.020, p < 0.01$; Cramer's $V = 0.359, p < 0.01$.

As compared to the Indian sample, the nostalgic events recalled by the NZ sample were more specific than thematic, the events were more likely to involve only the participants themselves and less likely to involve friends or partners, less likely to be about a daily-routine activity, and more likely to be of a positive rather than a negative affective tone.

Experiential Nature of State Nostalgia. The motivation to go back to the event showed different trends between the two samples but the difference was not statistically significant ($\chi^2 (1, N = 173) = 3.394, p = 0.065$; Cramer's $V = 0.140, p = 0.065$). The Indian sample showed a higher motivation to want to return to the past—73% yearned to go back and 27% did not wish to return—as compared to the NZ sample, 59% of whom wished to go back and 41% of whom did not wish to go back. No significant difference was observed between the two samples for the affective tone of the state nostalgic experience.

There were differences observed in the phenomenology of the experience between the Indian and NZ sample, in terms of the sensory components of 'hearing', 'seeing', 'talking',

‘spatial layout’ and the item on ‘reliving’ but not for the other phenomenological measures.

The mean, SD and *t*-test values are given in Table 5.2.

Table 5.2. Descriptive Statistics and Mean Comparison Values of Phenomenological Measures for the Two Experimental Samples—NZ and Indian.

Variable	Sample	Mean	SD	<i>t</i> -value	df	<i>p</i> -value
Reliving	NZ	5.10	1.4	−3.517	124	0.001
	Indian	5.75	1.3			
Hearing	NZ	3.88	1.8	−1.968	103	0.052
	Indian	4.42	2.0			
Seeing	NZ	5.39	1.2	−3.595	114	0.000
	Indian	5.99	1.2			
Talking	NZ	3.04	1.8	−3.219	96	0.000
	Indian	4.00	2.2			
Spatial Layout	NZ	5.56	1.4	−2.550	117	0.012
	Indian	6.04	1.3			

The experiential nature of nostalgia did not vary between the two samples in terms of affect and motivation, but it did show differences in phenomenology, where the Indian sample had a much more phenomenological experience in terms of ‘reliving’, ‘hearing’, ‘seeing’, ‘talking’ and the recall of ‘spatial layout’. However, all of these items are also characteristic of a more nostalgically prone individual, therefore, some of this variance could be accounted for by the higher nostalgia-proneness of the Indian sample.

5.3 Trait Experiential Nostalgia

The following section presents results concerning the trait level experiential nature of nostalgia in terms of its motivation, affect and the emotions contained in nostalgia. That is, this section discusses results on the experiential nature of *general nostalgic experiences* (or trait experiential nature of nostalgia) and not the components of state nostalgia that were discussed earlier. The items were measured on a seven-point Likert scale (see Chapter 3, Section 3.2.2); a higher value indicated a greater agreement with the statement. The items and

their descriptive statistics are discussed below in the respective sub-sections of motivational nature, affective nature and emotions.

Trait nostalgia was measured for respondents in both the indirect and direct conditions. This part of the analysis, thus, included data from both experimental conditions (N = 487 overall; N = 331 and 156 in the indirect and direct conditions, respectively). The mean age of participants were 28 years (SD = 14 years, Range = 18–79, N = 487); 68% females and 32% males. To ensure that the results described in the following section represented trait nostalgic natures and the different experimental manipulations during the observations of state nostalgia did not have an influence on the observed trait nostalgic natures, a mean comparisons between the two conditions was first carried out on the data obtained for these trait natures and no significant differences were observed in the results.

5.3.1 Motivational Nature of Trait Nostalgia

The motivational nature of the trait nostalgic experience was investigated through questions on the general nostalgic experiences (see Chapter 3, Section 3.1.3) to gauge the underlying motivational intents during general nostalgic experiences, i.e., what the person experiencing nostalgia wishes to do *when nostalgic* and what is meant by *missing a past time* (see Chapter 3, Section 3.2.2).

Table 5.3. Descriptive Statistics for the Items on the Phenomenology of Nostalgic Motivation (N = 487).

Item No.	Item	Mean	SD
1	<i>I miss 'those times'.</i>	5.71	1.126
1a	I wish I could go back to that time-period of my life and live it all over again.	4.57	1.775
1b	I wish it was possible to go back in time and momentarily experience 'those times' again.	5.46	1.534
1c	I enjoy reliving 'those times' in my mind but do not wish I could go back in time and experience them again.	3.71	1.752
2	<i>I want to experience similar 'times' again in future.</i>	5.51	1.514
2a	I want to have similar future experiences with the same people I had shared these past 'times' with, irrespective of where we are.	4.93	1.642
2b	I want to go back to the same places where I had 'those times' and have similar future experiences, irrespective of who I have them with.	3.8	1.699

The results (Table 5.3) indicated that the motivational nature of nostalgia did involve a component of *missing the past* and wanting to experience *similar future times*, as a high agreement was obtained for both items—both items received a rating in between 'somewhat' and 'mostly agree' (5.71 and 5.51, respectively).

Sub-Components of Item 1. To further understand what the nostalgic experience of *missing the past* and wanting to experience *similar future times* entail, their sub-items (1a–c and 2a–b) were correlated with the main item, respectively (items 1 and 2), and a regression analysis was conducted to see which sub-components best described and predicted these two motivational natures.

Missing the past showed a positive correlation with wishing to *momentarily relive the past* (Q1a) ($r = 0.473, p < 0.01$), wishing to *relive the past all over again* (Q1d) ($r = 0.467, p$

< 0.01,) and a negative correlation with enjoying *reliving the past in mind* but not wishing to go back (Q1c) ($r = -0.270$, $p < 0.01$, $N = 487$ for all). Regression analysis of the sub-items 1a, 1b and 1c of the main item 1, showed that the first two items were able to explain the variance in *missing the past*, but the last item (1c) was not a significant predictor ($R^2 = 0.306$, $p < 0.01$) and item 1b ($\beta = 0.330$) was found to be a stronger predictor than item 1a ($\beta = 0.320$).

This indicates that when the general nostalgic experience is described as missing the past, it is slightly more likely to translate to a wish to *momentarily relive the past* than a wish to *live the past all over again*. Additionally, although the wish to *relive the past in mind* without going back is sometimes a characteristic of the nostalgic motivation, it is not a representation of the same concept as *missing the past*, as it was not found to be a significant predictor of the latter in a multiple regression. However, a significant negative correlation was observed between the two items, suggesting that they are at the opposite ends of a continuum representing nostalgic motivation. Paired samples *t*-tests between items 1a, 1b and 1c showed that they were all significantly different from each other (see Table 5.4). This indicates that the three studied sub-components of *missing the past* are different aspects of nostalgic motivation.

Table 5.4. Mean Comparison Values of Items on the Motivational Nature of Nostalgia.

Item Pairs	Mean	SD	<i>t</i> -value	<i>p</i> -value
Pair 1 Relive the past all over– Momentarily relive the past	–0.885	1.757	–11.119	.000
Pair 2 Relive the past all over– Relive the past in mind	0.871	3.042	6.316	.000
Pair 3 Momentarily relive the past– Relive the past in mind	1.756	2.749	14.095	.000

Sub-Components of Item 2. Wanting to experience *similar future times* showed a more positive correlation with wanting *similar future times with the same people irrespective of place* ($r = 0.458, p < 0.01, N = 487$) than it did with wanting *similar future times in the same place irrespective of people* ($r = 0.213, p < 0.01, N = 487$). Regression analysis showed that both *similar future times with the same people irrespective of place* (item 2a) and *similar future times in the same place irrespective of people* (item 2b) were able to explain the variance in wanting *similar future times* ($R^2 = 0.481, p < 0.01$) but the former (item 2a, $\beta = 0.403$) had a regression weight three times that of the latter (item 2b, $\beta = 0.131$). This indicates that wanting *similar future times* translates to wanting *similar future times with the same people irrespective of place*, and although the *place* is still relevant, it is not as important. Paired samples *t*-tests between items 2a and 2b showed that they were significantly different from each other (see Table 5.5), suggesting that for some individuals

the *people* in the recalled event were more important for the nostalgic experience, while for others it was the *place* where the recalled event took place that was of more significance.

Missing the past showed a positive correlation with wanting to experience *similar future times* (Q2) ($r = 0.365, p < 0.01, N = 487$), wanting *similar future times with the same people irrespective of the place* ($r = 0.255, p < 0.01, N = 487$), and wanting *similar future times in the same place irrespective of the people* ($r = 0.123, p < 0.01, N = 487$). A multiple regression analysis showed wishing to *relive the past all over again* (item 1a), wishing to *momentarily relive the past* (item 1b) and wanting *similar future times* (item 2) predicted *missing the past* (item 1) ($R^2 = 0.574, F(3, 483) = 79.077, p < 0.01$), where item 1b was the strongest predictor ($\beta = 0.206$), followed by item 1a ($\beta = 0.183$) and item 2 ($\beta = 0.125$). This indicates that when nostalgia is described as *missing the past* it also translates to a want for *similar future times*, although missing the past is more characteristic of wishing to go back *relive the past*, either *momentarily* or *all over again*.

Paired samples *t*-tests between item 2 and items 1a, 1b and 1c showed that they were all significantly different from each other, except for the pair comprising item 1b and item 2 (see Table 5.5). This suggests that while wishing to *relive the past all over again* and enjoying *reliving the past in mind* is significantly different from wanting *similar future times*, wishing to *momentarily relive the past* taps into the same construct as the nostalgic motivation for *similar future times*.

Table 5.5. Mean Comparison Values of the Items on Motivational Nature of Nostalgia

	Item Pairs	Mean	SD	<i>t</i>-value	<i>p</i>-value
Pair 1	Relive the past all over– Similar future times	–0.930	1.935	–10.609	.000
Pair 2	Momentarily relive the past– Similar future times	–0.045	1.705	–0.585	.559
Pair 3	Relive the past in mind– Similar future times	–1.801	2.551	–15.576	.000
Pair 4	Similar future times with the same people– Similar future times in the same place	1.127	2.180	11.411	.000

Thus, the results indicate that there are four distinct motivational types of nostalgia that might differ from one individual to the next. That is, the nostalgic experience can sometimes be a wish to go back to the past and relive it momentarily, sometimes it can be a wish to go back to the past and live it all over again, sometimes it is a wish to simply enjoy reliving the event in mind without including a wish to go back to the past and at other times it becomes a wish to have similar experiences in the future, usually with the same people from the past.

5.3.2 Affective Nature of Trait Nostalgia

5.3.2.1 Affective Tone

The affective tone of general nostalgic experiences was studied in terms of the valence of the experienced affect—*positive*, *negative* or *mixed*; their descriptive statistics are given in Table 5.6.

Table 5.6. Descriptive Statistics for the Items on the Phenomenology of the Affective Nature of Nostalgia (N = 487).

Item No. (continued...)	Item	Mean	SD
1	I feel happy recalling ‘those times’	5.68	1.229
2	I feel sad recalling ‘those times’.	3.83	1.764
3	I feel both happy recalling ‘those times’ and sad, at the same time, that ‘those times’ are over.	5.41	1.457

The nostalgic experience is, thus, more of a *positive* (happy) or *mixed* (both happy and sad) experience than a *negative* (sad) one, receiving an average rating of ‘6—mostly agree’, ‘5—somewhat agree’ and ‘4—neither agree or disagree’, respectively, when asked to what extent these affective natures describe the affective nature of general nostalgic experiences.

Interrelations between the different nostalgic affective tones. *Positive* affect nostalgia showed a moderate negative correlation with *negative* affect nostalgia ($r = -0.369$, $p < 0.01$, $N = 487$), however, the correlation was not a perfect negative one, suggesting that the nostalgic experience is not *always positive* or *always negative* for a particular individual. *Mixed* affect nostalgic experience showed a moderate correlation with *negative* affect nostalgic experience ($r = 0.321$, $p < 0.01$, $N = 487$) and a weak correlation with *positive* affect nostalgic experience ($r = 0.172$, $p < 0.01$, $N = 487$).

Paired samples *t*-tests between the items on *positive*, *negative* and *mixed* affect showed that they were all significantly different from each other (see Table 5.7). Multiple

regression analysis showed that both *positive*- and *negative-affect* nostalgia could predict *mixed-affect* nostalgia ($R^2 = 0.448$, $F(2, 484) = 60.860$, $p < 0.01$), with *negative* affect ($\beta = 0.445$) being a better predictor of *mixed* affect nostalgia than *positive* affect ($\beta = 0.336$).

Table 5.7. Mean Comparison Values of Items on the Motivational Nature of Nostalgia.

	Item Pairs	Mean	SD	<i>t</i> -value	<i>p</i> -value
Pair 1	Positive Affect– Negative Affect	1.852	2.494	16.388	.000
Pair 2	Positive Affect– Mixed Affect	0.269	1.737	3.418	.001
Pair 3	Negative Affect– Mixed Affect	–1.583	1.893	–18.452	.000

From the mean descriptions it could be concluded that the nostalgic experience mostly comprises *positive* affect (as per the Likert scale ratings), often contains *mixed* affect and sometimes contains *negative* affect. The regression analysis suggests that when nostalgia is *mixed*, *negative* affect contributes more to the mixedness than does *positive* affect. Therefore, it could be that nostalgia is mainly a positively toned experience (as per the Likert scale ratings) and at times negative affect is added to the picture, which then makes the nostalgic affect *mixed* in nature.

Associations between affective and motivational types. Regression analyses showed that wishing to *momentarily relive the past* ($\beta = 0.233$), enjoying *reliving the past in mind* ($\beta = 0.108$) and wanting *similar future times* ($\beta = 0.252$) predicted *positive* affect but wishing to *relive the past all over* was not a significant predictor ($R^2 = 0.376$, $F(3, 483) = 26.479$, $p < 0.01$). Wanting to experience *similar future times* ($\beta = -0.110$) predicted *negative* affect ($R^2 = -0.110$, $F(1, 485) = 5.947$, $p < 0.05$) but the other motivational types were not significant predictors, where the negative beta coefficient suggests that the greater the want to

experience similar future times the less negative the nostalgic affect. Wishing to *relive the past all over* ($\beta = 0.156$) and wishing to *momentarily relive the past* ($\beta = 0.258$) predicted *mixed* affect but the other motivations were not significant predictors ($R^2 = 0.436$, $F(2, 484) = 56.763$, $p < 0.01$).

This suggests that wishing to relive the event in mind at the present time-point, or wishing to experience similar events in future or wishing to only momentarily return to the past to re-experience the event lead to a *positive* nostalgic experience, whereas, not wishing to recreate the event in future leads to the experience being *negative* and wishing to go back to the past time period to re-experience the event, either all over or momentarily, is likely to lead to the nostalgic experience being a *mixture of positive and negative* affect.

5.3.2.2 Emotions in Trait Nostalgic Experiences

Questions were asked on the emotions contained in general nostalgic experiences—*affection, achievement, gratitude, loss and meaningfulness*; the descriptive statistics are given in Table 5.8.

Table 5.8. Descriptive Statistics for the Items on Emotions in Nostalgia (N = 487).

Item No. (...continued)	Item	Mean	SD
3	I feel affectionate towards life and the past, thinking about 'those times'.	5.63	1.059
4	I feel a sense of achievement, thinking about 'those times'.	4.53	1.560
5	I feel a sense of gratitude thinking about 'those times'.	5.52	1.275
6	I feel a sense of loss, thinking about 'those times'.	4.32	1.764
7	Life seems meaningful, when I think of 'those times'.	5.11	1.435

The general nostalgic experiences included the emotions of *affection* (6–‘mostly agree’), and *gratitude* (6–‘mostly agree’), and the feelings of *meaningfulness* (5–‘somewhat agree’), *achievement* (5–‘somewhat agree’) and to an extent that of a *sense of loss* (4–‘neither agree nor disagree’).

Associations between affective types and emotions in nostalgia. *Positive* affect nostalgic experiences showed a moderate correlation with *affection* and *gratitude* ($r = 0.301$ and 0.340 , $p < 0.01$, respectively), a weak correlation with *achievement* and *meaningfulness* ($r = 0.112$, $p < 0.05$ and $r = 0.195$, $p < 0.01$, respectively) and a negative correlation with *sense of loss* ($r = -0.155$, $p < 0.01$). *Negative* affect showed a strong correlation with *sense of loss* ($r = 0.515$, $p < 0.01$). *Mixed* affect showed a moderate correlation with *affection*, *sense of loss*, *gratitude* and *meaningfulness* ($r = 0.318$, 0.366 , 0.270 , 0.218 , $p < 0.01$, respectively).

Regression analyses showed that *affection* ($\beta = 0.187$), *gratitude* ($\beta = 0.264$) and *sense of loss* ($\beta = -0.162$) predicted *positive* nostalgic affect ($R^2 = 0.414$, $F(3, 483) = 33.270$, $p < 0.01$) but *achievement* was not a significant predictor. A *sense of loss* in general nostalgic experiences ($\beta = 0.515$) predicted *negative* nostalgic affect ($R^2 = 0.265$, $F(1, 485) = 174.870$, $p < 0.01$); the other emotions were not found to be significant predictors of this nostalgic affect type. *Affection* ($\beta = 0.253$), *gratitude* ($\beta = 0.151$) and *sense of loss* ($\beta = 0.362$) predicted *mixed* nostalgic affect ($R^2 = 0.253$, $F(3, 483) = 54.625$, $p < 0.01$).

Regression analyses showed that *sense of loss* ($\beta = 0.123$) predicted wishing to *relive the past all over* ($R^2 = 0.142$, $F(1, 485) = 10.001$, $p < 0.01$); none of the other emotions were found to be significant predictors of this nostalgic motivation type. *Achievement* ($\beta = -0.107$), *gratitude* ($\beta = 0.182$), *sense of loss* ($\beta = 0.110$) and *meaningfulness* ($\beta = 0.204$) predicted wishing to *momentarily relive the past* ($R^2 = 0.314$, $F(4, 482) = 13.224$, $p < 0.01$). *Sense of loss* ($\beta = -0.098$) and *meaningfulness* ($\beta = -0.146$) predicted enjoying *reliving the past in mind* ($R^2 = 0.314$, $F(4, 482) = 13.224$, $p < 0.01$). *Gratitude* ($\beta = 0.123$) and *meaningfulness* (β

= 0.281) predicted wanting to experience *similar future times* ($R^2 = 0.346$, $F(2, 484) = 32.834$, $p < 0.01$).

The above analyses suggest that feeling a sense of *affection* and *gratitude* when nostalgic is associated with positive or mixed-affect general nostalgic experiences. Feeling grateful when nostalgic is characterised by a wish to momentarily re-experience the event and re-experience the event in future. Feeling a *sense of loss* when nostalgic is positively associated with the motivational natures of wishing to go back to the past to re-experience the event, all over again or momentarily, negative and mixed-affect nostalgic experience; and is inversely associated with the motivational nature of wishing to relive the event in mind at the present time-point without going back to it. Finding life to be *meaningful* when nostalgic is positively associated with wishing to momentarily experience the past and re-experience similar future events and is indirectly related to wishing to only relive the event in mind at the present time-point; it was also positively correlated with mixed affect but was not found to predict this type of nostalgic affect.

5.4 Associations between the Experiential Nature of Trait Nostalgia and the Individual-Difference Factors; and Associations between Trait and State Nostalgia

This section describes results on the associations between trait experiential nature of nostalgia in terms of its affective and motivational nature and individual-difference factors (Section 5.3.1), to see if trait nostalgic natures vary among individuals of different age, gender, culture, place of living, nostalgia-proneness and levels of life satisfaction. Next, results on the associations between the observed differences in the components of state nostalgic process (Sections 5.3.2, 5.3.3 and 5.3.4) and the results of the trait nostalgic propensities in general nostalgic experiences, are described.

5.4.1 Individual-Difference Factors

Age. Age was not significantly correlated with wishing to *relive the past all over*, but showed a negative correlation with wishing to *momentarily relive the past* ($r = -0.133, p < 0.01$) and showed a positive correlation with enjoying *reliving the past in mind* ($r = 0.124, p < 0.01$). Older people were less likely to want to *experience similar future times with the same people irrespective of the place* ($r = -0.203, p < 0.01$), but more likely to feel *happiness* ($r = 0.106, p < 0.01$) and *achievement* ($r = 0.145, p < 0.01$).

Gender. The motivational types of general nostalgic experiences did not differ between the different genders but showed difference in terms of characterisation of the nostalgic affect as *negative* ($t(305) = 2.622, p < 0.01$) and as *mixed* affect ($t(284) = 3.243, p < 0.01$), where females described general nostalgic experiences to be more *negative* ($M = 3.97, SD = 1.76$) and *mixed-affect* in nature ($M = 5.56, SD = 1.75$) than their male counterparts ($M = 3.53$ and $5.10, SD = 1.75$ and 1.52 , respectively). Females were also more likely to endow nostalgia with the emotions of *affection* ($t(285) = 2.019, p < 0.05, M = 5.70$ and $5.49, SD = 1.03$ and 1.11 , for females and males, respectively), *gratitude* ($t(289) = 3.543, p < 0.01, M = 5.67$ and $5.22, SD = 1.23$ and 1.31 , for females and males, respectively) and *meaningfulness* ($t(285) = 2.697, p < 0.01, M = 5.24$ and $4.85, SD = 1.39$ and 1.50 , for females and males, respectively).

Place of Living. Those who were living in their home-country ($M = 5.52, SD = 1.53$) showed a significantly greater wish to *momentarily relive the past* than those who were not living in their home-country ($M = 5.12, SD = 1.53$); $t(107) = 2.144, p < 0.05$. Living in one's home-country ($M = 3.88, SD = 1.72$) was also associated with a greater want for *similar future times in the same place irrespective of the people* one is with than not living in one's home-country ($M = 3.38, SD = 1.54$); $t(115) = 2.606, p < 0.01$.

Nostalgia-Proneness. Nostalgia-proneness showed a positive correlation with wishing to *relive the past all over again* ($r = 0.295, p < 0.01$), wishing to *momentarily relive the past* ($r = 0.244, p < 0.01$) and a negative correlation with enjoying *reliving the past in mind* ($r = -$

0.181, $p < 0.01$). No significant correlation was observed between nostalgia-proneness and wanting *similar future times*. The *mixed* affective state showed the highest correlation with nostalgia-proneness ($r = 0.296$, $p < 0.01$), followed by the affective state of *happiness* ($r = 0.123$, $p < 0.01$) and *sadness* ($r = 0.107$, $p < 0.05$). Nostalgia-proneness showed significant correlations with all measured nostalgic emotions—*affectionate* ($r = 0.293$, $p < 0.01$), *achievement* ($r = 0.169$, $p < 0.01$), *gratitude* ($r = 0.223$, $p < 0.01$), *loss* ($r = 0.161$, $p < 0.01$) and *meaningfulness* ($r = 0.296$, $p < 0.01$).

Life Satisfaction. Life satisfaction showed a negative correlation with wishing to *relive the past all over* ($r = -0.160$, $p < 0.01$) and showed a positive correlation with enjoying *reliving the past in mind* ($r = 0.206$, $p < 0.01$); showed a positive correlation with the affective state of nostalgia being characterised as *happiness* ($r = 0.154$, $p < 0.01$), and negative correlations with the affective state of nostalgia being characterised as *sadness* ($r = -0.152$, $p < 0.01$) and as a *mixed* affective state ($r = -0.141$, $p < 0.01$). Life satisfaction showed significant correlations with almost all measured affective states—*affectionate* ($r = 0.163$, $p < 0.01$), *achievement* ($r = 0.168$, $p < 0.01$), *gratitude* ($r = 0.136$, $p < 0.01$) and *loss* ($r = -0.278$, $p < 0.01$), but showed no relation with *meaningfulness*.

Culture. Cultural differences were observed only in terms of the motivational natures of wishing to *relive the past all over* ($t(284) = 3.243$, $p < 0.01$). Indians ($M = 5.39$, $SD = 1.75$) were more likely to wish to return to the past and live it all over again than the New Zealanders ($M = 4.50$, $SD = 1.76$).

5.4.2 Process Parameters

Rated-intensity (on Likert scale) of the state nostalgic experience showed a positive correlation with wishing to *relive the past all over* again ($r = 0.181$, $p < 0.01$, $N = 487$) and showed a negative correlation with enjoying *reliving the past in mind* ($r = -0.159$, $p < 0.01$). Rated-intensity also correlated positively with the *mixed* affective state ($r = 0.140$, $p < 0.01$) and the nostalgic emotions of *affection* ($r = 0.173$, $p < 0.01$), *achievement* ($r = 0.148$, $p < 0.01$), *gratitude* ($r = 0.136$, $p < 0.01$), *loss* ($r = 0.161$, $p < 0.01$) and *meaningfulness* ($r = 0.296$, $p < 0.01$).

0.01), *gratitude* ($r = 0.135, p < 0.01$) and *meaningfulness* ($r = 0.211, p < 0.01$). The nostalgic emotion of *affection* also correlated with intensity of the state nostalgic process function, measured in terms of maximum intensity level ($r = 0.146, p < 0.05$).

The other parameters of response time, duration, and the process function parameters did not show any significant correlation with the trait motivational and affective natures of nostalgia.

5.4.3 Event Characteristics

Type. The *mixed-affect* type trait nostalgic nature showed an association with the *type of event* recalled during the state nostalgic experience, i.e., thematic and specific, ($t(285) = 2.697, p < 0.01$). Those who showed a higher agreement for the general nostalgic experiences being *mixed* in affective nature were more likely to recall thematic events ($M = 5.66, SD = 1.26$) than specific events ($M = 5.38, SD = 1.52$). A higher agreement on trait nostalgia comprising *a sense of loss* was associated with the recall of more thematic than specific events, however, the difference was not significant at the 0.05 confidence level ($p = 0.068$).

Location. The trait nostalgic motivational natures of wishing to *relive the past all over*, wanting to experience *similar future times in the same place irrespective of the people* and trait nostalgic experiences that contain a *sense of achievement* showed an association with the *location of the event* recalled during the state nostalgic experience. A higher agreement on these aspects of trait nostalgia was associated with the recall of a *one-off event that took place in a city or town that was only visited once* for work or a competition or vacation; Table 5.9. These one-off events that took place in an unknown city or town were also associated with *positive-affect* trait nostalgia but the difference was just shy of being significant at the 0.05 confidence level ($p = 0.057$).

Table 5.9. Mean Comparisons for Event Location and Trait Nostalgic Motivational and Affective Nature.

Trait Experiential Nature	Event Location	Mean	SD	<i>t</i> -test value	<i>df</i>	<i>p</i> -value
Relive the past all over	Frequently visited	4.65	1.77	-2.466	52	0.023
	Visited once	5.27	1.61			
Similar future times in the same place irrespective of people	Frequently visited	3.68	1.76	-6.916	57	0.000
	Visited once	5.11	1.28			
Emotion—achievement	Frequently visited	4.42	1.60	-3.334	53	0.002
	Visited once	5.14	1.36			

Activity. The trait nostalgic motivational natures of wishing to *momentarily relive the past*, wanting *similar future times with the same people irrespective of the place* and *positive* and *negative* affect trait nostalgic nature showed an association with the *activity of the event* recalled during the state nostalgic experience. A higher agreement on all of these aspects of trait nostalgia, except for negative affect, was associated with a greater recall of leisure or hobby activities, followed by social gathering activities and daily-routine activities; negative affective nature was associated with a greater recall of daily-routine activities, followed by leisure or hobby activities and social gathering activities; Table 5.10.

Table 5.10. Mean Comparisons for Event Activity and Trait Nostalgic Motivational and Affective Nature.

Trait						
Experiential	Event Activity	Mean	SD	F value	df	p-value
Nature						
Momentarily relive the past	Leisure/hobby	5.59	1.44	4.605	2, 419	0.011
	Social gatherings	5.37	1.64			
	Daily-routine	4.95	1.78			
Similar future times with the same people, place irrelevant	Leisure/hobby	5.11	1.59	3.60	2, 419	0.028
	Social gatherings	4.61	1.81			
	Daily-routine	4.62	1.76			
Affect— positive	Leisure/hobby	5.83	1.10	11.507	2, 419	0.000
	Social gatherings	5.66	1.26			
	Daily-routine	5.02	1.61			
Affect— negative	Leisure/hobby	3.68	1.78	6.27	2, 419	0.002
	Social gatherings	3.46	1.73			
	Daily-routine	4.52	1.64			

Event Affect. The trait nostalgic motivational natures of wishing to *momentarily relive the past*, wanting *similar future times with the same people irrespective of the place* and *positive* affect trait nostalgic nature, showed an association with the *affective tone of the recalled event* during the state nostalgic experience. A higher agreement on all of these aspects of trait nostalgia, was associated with a greater recall of positive events, followed by neutral, mixed affect and negative events during the state nostalgic experience. The *negative* affective nature of trait nostalgia was associated with a greater recall of negative events, followed by mixed affect, neutral and positive events. The emotion of *gratitude* in trait nostalgic experience was associated with a greater recall of mixed affect events, followed by positive, neutral and negative events during state nostalgic experience; Table 5.11.

Table 5.11. Mean Comparisons for State Event Affect and Trait Nostalgic Motivational and Affective Nature.

Trait Experiential Nature	Event Affective Nature	Mean	SD	<i>F</i> value	<i>df</i>	<i>p</i> -value
Momentarily relive the past	Positive	5.61	1.46	3.784	3, 477	0.011
	Negative	4.95	1.76			
	Neutral	5.12	1.27			
	Mixed	5.41	1.32			
Similar future times with the same people; place irrelevant	Positive	5.07	1.57	3.371	3, 477	0.018
	Negative	4.53	1.90			
	Neutral	4.38	1.51			
	Mixed	4.95	1.74			
Affect—positive	Positive	5.84	1.09	14.419	3, 477	0.000
	Negative	4.75	1.77			
	Neutral	5.76	0.97			
	Mixed	5.63	1.04			
Affect—negative	Positive	3.67	1.76	5.138	3, 477	0.002
	Negative	4.46	1.71			
	Neutral	3.71	1.76			
	Mixed	4.50	1.66			
Emotion—gratitude	Positive	5.58	1.20	3.904	3, 477	0.009
	Negative	5.15	1.53			
	Neutral	5.97	1.27			
	Mixed	5.54	0.93			

5.4.4 State Experiential Nature

5.4.4.1 Affective Tone of the State Nostalgic Experience

The state nostalgic affect experienced showed varying associations with different aspects of trait nostalgic motivation and affect. The trait nostalgic motivational nature of wishing to *relive the past in mind*, *momentarily relive the past* and wanting *similar future*

times showed a higher level of positive-affect state nostalgic experience than the other affect types (see Table 5.12). Trait and state affective natures of nostalgia corresponded to each other. A higher agreement for *trait nostalgia* being characterised as *positive* was associated with a more *positive state nostalgic* experience, followed by *mixed-affect*, *neutral* and *negative affect state nostalgic* experiences. A higher agreement for *trait nostalgia* being characterised as *negative* was associated with a more *negative state nostalgic* experience, followed by *mixed-affect*, *neutral* and *positive affect state nostalgic* experiences. A higher agreement for *trait nostalgia* being characterised as *mixed-affect* was associated with a more *mixed-affect state nostalgic* experience, followed by *negative* and *positive* experiences.

A higher agreement for *trait nostalgia* containing the emotions of *affection* and *gratitude* was associated with more *positive state nostalgic* experience, followed by *mixed-affect*, and *negative affect state nostalgic* experiences. A higher agreement for *trait nostalgic* affect involving a *sense of loss* was associated with a more *mixed-affect state nostalgic* experience, followed by *negative* and *positive* affect experiences, Table 5.12.

Table 5.12. Mean Comparisons for State Nostalgic Experience and Trait Nostalgic Motivational and Affective Nature.

Trait Experiential Nature	Event Affective Nature	Mean	SD	F value	df	p-value
Relive in mind	Positive	3.84	1.73	4.300	2, 415	0.037
	Negative	3.78	1.80			
	Mixed	3.27	1.65			
Momentarily relive the past	Positive	5.56	1.45	3.077	2, 415	0.047
	Negative	4.92	1.89			
	Mixed	5.55	1.43			
Similar future times	Positive	5.60	1.42	9.413	2, 415	0.000
	Negative	4.46	1.95			
	Mixed	5.52	1.53			

Affect—positive	Positive	5.91	1.00	29.657	2, 415	0.000
	Negative	4.41	1.76			
	Mixed	5.47	1.25			
Affect—negative	Positive	3.30	1.69	50.122	2, 415	0.000
	Negative	4.97	1.34			
	Mixed	4.92	1.39			
Affect—mixed	Positive	5.18	1.47	15.826	2, 415	0.000
	Negative	5.46	1.73			
	Mixed	6.08	1.11			
Emotion—gratitude	Positive	5.63	1.24	8.474	2, 415	0.000
	Negative	4.76	1.50			
	Mixed	5.62	1.08			
Emotion—loss	Positive	3.90	1.75	23.841	2, 415	0.000
	Negative	5.00	1.45			
	Mixed	5.14	1.64			

5.4.4.2 Motivational Intention in State Nostalgic Experience

The trait nostalgic motivational natures of wishing to *relive the past all over*, wishing to *momentarily relive the past*, wishing to *relive the past in mind*, wanting *similar future times in the same place irrespective of the people*, wanting *similar future times with the same people irrespective of the place* and trait nostalgic emotions of *affection* and *meaningfulness* showed associations (Table 5.13) with the *state motivational intentions*. A higher agreement on all but one of these aspects of trait nostalgia was associated with a wish to go back to the past during the state nostalgic experience; the trait nostalgic motivation of wishing to *relive the past in mind* was associated with a state nostalgic motivation of not wishing to return to the past.

Table 5.13. Mean Comparisons for State Nostalgic Motivation and Trait Nostalgic Motivational and Affective Nature.

Trait Experiential Nature	State	Mean	SD	<i>t</i> -test value	<i>df</i>	<i>p</i> -value
	Motivation (Go Back Or Not)					
Relive the past all over	Yes	5.22	1.508	-8.384	252	0.000
	No	3.78	1.815			
Momentarily relive the past	Yes	5.82	1.317	-5.601	241	0.000
	No	4.94	1.681			
Relive the past in mind	Yes	3.16	1.602	7.676	269	0.000
	No	4.48	1.784			
Similar future times in the same place; people irrelevant	Yes	3.97	1.815	-3.397	321	0.000
	No	3.39	1.651			
Similar future times with the same people; place irrelevant	Yes	5.28	1.552	-4.066	262	0.000
	No	4.58	1.779			
Affect—positive	Yes	5.90	1.103	-4.417	234	0.000
	No	5.30	1.460			
Affect—mixed	Yes	5.65	1.342	-4.122	255	0.000
	No	5.03	1.589			
Emotion—meaningfulness	Yes	5.21	1.376	-2.479	271	0.017
	No	4.86	1.516			

5.4.4.3 Phenomenological Nature of State Nostalgic Experience

Associations between the trait nostalgic experiential natures and the phenomenology of state nostalgic experience in terms of its belief and recollection components (as per the Rubin Scale) were studied.

Table 5.14. Correlation between the State Nostalgia Phenomenology Items (including both experimental conditions, N = 487) and Trait Nostalgic Motivational and Affective Nature.*Indicates significant difference, $p < 0.05$; **indicates significant difference, $p < 0.01$.

Trait Nostalgia Items	Phenomenology Items			
	Reliving	Emotions	Back in time	Rehearsal
Relive the past all over	.165**	.114**	.175**	.161**
Relive the past in mind	-.096*	-.125**	-.172*	-.110*
Similar future times with the same people, place irrelevant		.099**		
Affect—positive	.143**			.108*
Affect—negative		.120**		
Affect—mixed	.091**	.110*	.119**	.176**
Emotion—affection	-.131**	.126**		.173**
Emotion—achievement	.095*	.187**	.130**	.194**
Emotion—gratitude		.105*		.167**
Emotion—loss			.098*	.123**
Emotion—meaningfulness	.169**	.125**	.117*	.162**

Reliving showed a positive correlation with *happy* and *mixed-affect* trait nostalgic experience and emotions of *affection*, *achievement* and a sense of *meaningfulness*. Interestingly, it showed a negative correlation with wishing to only *relive the event in mind*. Phenomenology of *travelling back in time* when nostalgic showed a positive correlation with wishing to *relive the past all over* and *mixed-affect* trait nostalgia, and showed a negative correlation with wishing to *relive the past in mind*. Phenomenological experience of *reliving the emotions felt during the original event* showed a positive correlation with wishing to *relive the past all over* again, *negative* and *mixed-affect* trait nostalgia, and showed a negative correlation with wishing to only *relive the past in mind*. The trait nostalgic motivational natures of wishing to *relive the past all over*, *positive* and *mixed* nostalgic affect, and all studied nostalgic emotions showed a positive correlation with *rehearsal* of the event; but showed a negative correlation with *wishing to relive the event in mind*.

5.4.5 Summary of Trait Nostalgia Affect and Motivation Associations

This section provides a summary of the different nostalgic trait affect and motivation type examined in this study (as described in the preceding sections). For each sub-type of trait nostalgic affect and motivation, the state nostalgic components and the characteristics of the individual having the nostalgic experience are described.

Positive-Affect Trait Nostalgia. Older individuals and those more satisfied with their lives were more likely to describe trait nostalgic affect as *positive*. During the state nostalgic experience elicited in the course of the study, *positive-affect* trait nostalgia was associated with recall of events that occurred in a place that was only visited once, leisure or hobby event activities, and recall of events that were positively toned at encoding and nostalgic experiences that were positive in nature. Wishing to *momentarily relive the past*, enjoying *reliving the past in mind* and wanting to experience *similar future times* were associated with *positive-affect* trait nostalgia.

Negative-Affect Trait Nostalgia. Women and those who were less satisfied with life were more likely to describe the trait nostalgic affect as *negative*. This type of trait nostalgic affect was associated with a greater recall of daily-routine event activities and was associated with to both a greater recall of, events that were negatively toned at encoding and nostalgic experiences in this study. Not wanting to experience *similar future times* was associated with *negative-affect* trait nostalgia.

Mixed-Affect Trait Nostalgia. Women, more nostalgically prone individuals and those that were less satisfied with life were more likely to describe the nostalgic affect as *mixed*. This type of nostalgic affect was associated with a more intense rated-nostalgia, a greater recall of thematic events, and was associated with a greater recall of *events that were negatively toned* at encoding and *experiences that were mixed in nature*, during the state nostalgic experience elicited in this study. At times the nostalgic motivation for *momentarily*

reliving the past was associated with *mixed-affect* trait nostalgia, along with wishing to *live the past all over again*.

Affection and Gratitude. Women, more nostalgically prone individuals and those that were more satisfied with life were more likely to describe the nostalgic experience as involving a feeling of *affection* and *gratitude*. Both *affection* and *gratitude* was associated with a more intensely rated nostalgia. Agreement for trait nostalgia containing *affection* was associated with a greater likelihood of a positively toned state nostalgic experience and a motivation to go back to the past. Agreement for trait nostalgia containing *gratitude* was associated with a greater likelihood of a negatively toned event but positively toned nostalgic experiences, during the state nostalgic process.

Achievement. Older individuals, the more nostalgically prone people and those that were more satisfied with life were more likely to rate trait nostalgic experiences as containing *achievement*. Agreement on trait nostalgia containing *achievement* was associated with a greater likelihood of a more intense rated-nostalgia, mixed-affect state nostalgic experiences and a greater recall of events that occurred in a place that was only visited once.

Loss and Meaning. The more nostalgically prone individuals and those that were less satisfied with life were more likely to rate trait nostalgic experiences as containing a *sense of loss*. Females and the more nostalgically prone individuals were more likely rate trait nostalgic experiences as contributing to the derivation of *meaning* in life. Agreement on trait nostalgia contributing to derivation of *meaning in life* was associated with a greater likelihood of a more intense rated-nostalgia and a greater wish to go back to the past, during the state nostalgic experiences.

Momentarily relive the past. Older individuals showed a lower motivation to *momentarily relive the past*. More nostalgically prone individuals and those not living in their homecountry, showed a greater motivation to *momentarily reliving the past*. Wishing to *momentarily relive the past* was associated with a greater recall of leisure or hobby event

activities and positively toned events, and a wish to go back to the past during the state nostalgic experience. This nostalgic motivational type was also associated with a stronger belief in the event being remembered and not just known.

Relive the past all over. The more nostalgically prone individuals, those less satisfied with life and the Indian sample showed a higher wish to *relive the past all over* again. This nostalgic motivational type also showed an association with a more intense rated-nostalgia, greater recall of events that occurred in a place that was visited only once and a wish to go back to the event during the state nostalgic experience. In terms of phenomenology, this motivational type was associated with greater reliving, travelling back in time and re-experiencing of emotions that were felt at the time of event encoding.

Relive the past in mind. Older individuals, the less nostalgically prone and those who were more satisfied with life showed a higher wish to *relive the past in mind*. This motivational type was found to be associated with a less intense nostalgic experience and a wish to not return to the event during the state nostalgic experience. In terms of phenomenology, this motivational type was negatively correlated to reliving the event, remembering the event and not just knowing it occurred, travelling back in time and feeling the emotions that were felt back then.

Similar future times. Older individuals showed a lesser want to experience *similar future times with the same people irrespective of the place*. This motivation type was also found to be associated with a greater recall of leisure or hobby event activities, positively toned events, and a wish to go back to the past during the state nostalgic experience. Those who were in their homecountry showed a greater want to experience *similar future times in the same place irrespective of the people*. This motivation type was also found to be associated with a greater recall of events that occurred in a place that was only visited once and a wish to go back to the past during the state nostalgic experience.

This sums up the results of the trait nostalgic experiential nature in terms of its motivation, affect and individual-difference factors. In the next chapter, the results of Study

2, as discussed in Chapters 4 and 5 are summed up and the findings are put in context of the overall research questions and objectives.

6 Chapter 6: Discussion

The results of Study 2 (as discussed in Chapters 4 and 5) showed that, nostalgia is not a constant phenomenon and varies widely in its content and experiential nature, depending on the trigger that elicits the nostalgic experience and who it is experienced by. These findings are synthesised and their implications are discussed in this chapter. The research questions are discussed in terms of the whole picture, i.e., in the context of the research objectives.

6.1 General Discussion of Study Findings in the Context of Overall Research

Objectives

The main objective of this research work was to explore the operational process of nostalgia in terms of its cognitive and experiential components, namely, affect, motivation and phenomenology, through an empirical observation of state nostalgia, while accounting for the effect of trait nostalgia and other individual-difference factors. The findings of this research work with respect to these objectives are discussed below.

6.1.1 The Cognitive Aspects of Nostalgia

The cognitive aspects of nostalgia that were explored here included (i) the memory contents, i.e., the contents of the memory at the core of the phenomenon, (ii) some parameters of the cognitive process, (iii) descriptions of the phenomenology of the nostalgic experience and (iv) the nostalgic memories in the context of general autobiographical memories.

6.1.1.1 Memory Contents

Personal/Historical Nostalgia. The academic literature on nostalgia discusses that the nostalgic memory is not necessarily always of events that have been experienced personally but can also include events that have been vicariously experienced through media (Baker & Kennedy, 1994; Davis, 1979; Stern, 1992b; Holbrook & Schindler, 1991; Havlena & Holak, 1996; Goulding, 2001). While this is certainly true and was also observed in Study 1 when participants were asked if they become nostalgic about historical past eras, in Study 2

when a state nostalgia was observed without providing much context on the topic except for a brief dictionary definition of the construct, only one out of the 487 participants studied experienced historical nostalgia. This data-point was deleted from Study 2 analyses to keep the object of nostalgia constant and thus limited to personal nostalgia in this case. Thus, while historical nostalgia is experienced by people, it is not the predominant form of nostalgia experienced and is also not universal as only about half of the participants in Study 1 said they experienced historical nostalgia.

Age at Event—Evidence for a Nostalgia Bump. The predominant time-period that served as the source of nostalgic memories was adolescence and early adulthood. Older individuals showed a higher recall for memories from late adolescence and early adulthood, when asked to feel nostalgic. Thus, as suggested by Davis (1979), this time period was found to be a fertile ground for nostalgic memories. Further evidence for this is obtained from the direct stimulus condition, where on playing music from ones childhood and teenage years, for the former, people did not necessarily recall events from the target time-period of childhood and instead recalled events from their teenage years.

These findings are also reflective of the findings of memory research on reminiscence that show that memories from adolescence and young adulthood are quite salient in autobiographical memory recall of older adults (those above the age of 40 years), as when asked to produce memories from their past lives, it is usually memories from this time-period that they recall (Rubin, 1986; Rubin & Schulkind, 1997). Thus, there is evidence for a nostalgia bump akin to the reminiscence bump (Rubin, 1986).

Nevertheless, some people were nostalgic for memories from one's childhood, i.e., before the nostalgia bump, and surprisingly, individuals in their late seventies were also sometimes nostalgic for events that had occurred earlier in that decade of their life. Thus, it seems that teenage years, adolescence and early adulthood form the main source for nostalgic memories, but as suggested by Köneke (2011), nostalgia can be felt for all time-periods in life and is not

relegated to just these life stages. It does not pertain only to childhood memories either, as was postulated by the psychoanalytic school, where pathological nostalgia was thought to be a form of regression (Kleiner, 1970; McGriff, 1997).

Age of Memory. The memories that served as the object of nostalgia were nearly fifteen-years old, on average, and memories elicited by an indirect stimulus (nine-years old) were slightly but significantly older than that elicited by direct stimulus (seven-years old), even when the direct music stimulus were targeted at older memories. Studies on autobiographical memory have found the average age of memory recalled through cue words (words in the categories of ‘object’, ‘furniture’, and ‘affect’) to vary between 6 months to 3.25 years for ‘affect’ cues and 16 months to 3.6 years for ‘object’ cues (Conway, 1987; Robinson, 1976). Therefore, the average nostalgic memories appear to be older than general autobiographical memories. Nevertheless, surprisingly and contrary to what was assumed, an event did not have to be different from present-day events, in the distant past or from a different stage of life, to be eligible for nostalgic reverie, as the youngest memory recalled was only a day old, while the oldest was seventy-years old. The day-old nostalgic memories are surprising because the functions and benefits of nostalgia often focus on its role of connecting one to past selves that are disconnected from the present selves (Batcho, 1995; Davis, 1979; Sedikides et al., 2008). However, these findings suggest that besides its beneficial existential functions, nostalgia might also play some other ordinary role in our everyday lives, which is quite feasible given that most people experience nostalgia with a frequency of once a week (Wildschut et al., 2006).

Thematic–Specific Events. The nostalgic events were found to be mainly specific rather than thematic. That is, at the focus of the nostalgic memory there was a singular event that had occurred in one’s past, either once (e.g., riding a rollercoaster) or repetitively (e.g., swimming), rather than an overall theme with no singular event recalled where the recall pertained to the feeling of something without any event itself being recalled (e.g., schooldays,

nana's place, etc.). This has implications for understanding the nature of nostalgia. A nostalgic experience pertaining to a specific event makes the experience more about the event, i.e., the event is in the spotlight, whereas an experience focussed on a theme with no specific event in mind, makes the nostalgic experience about the feelings pertaining to that theme, i.e., the feelings are in the spotlight. Thus, nostalgic experiences involving specific events is likely to be driven by the cognitive factors of the event, whereas one involving thematic events is likely to be driven by the individual-difference factors of the person having the experience, where the affective components become more pertinent.

Event Contents. The contents of the nostalgic memories were analysed in terms of where the events took place, who were the characters in the event, what was the activity involved in the event and what the affective tone of the event was like at encoding (affective tone of event is discussed in the following sections). Additionally, Study 1 also addressed the issue of the triggers of nostalgia (see Chapter 2, Sections 2.3.3 and 2.4.1). While the contents of nostalgia have been discussed in the literature, an analysis of event contents with regards to all of the above categories and for experimentally manipulated state nostalgic experiences, has not been carried out. Only two studies (Holak & Havlena, 1992; Wildschut et al., 2006) have analysed the objects and triggers of autobiographical narratives, but these involved an overall evaluation of the object of nostalgia and did not include a content analysis. Other studies have usually carried out content analyses of nostalgia portrayed in the media (pictures or written text) (e.g., Baker and Kennedy, 1994; Havlena and Holak, 1996a), or surveyed people on their nostalgic feelings towards pre-selected items that were thought to be relevant by the researcher (Batcho, 1998).

Nostalgic memories were generally found to be set in frequently visited locales (like home, school, a playground) of one's hometown or a place one had lived in, rather than in novel places that were visited on holidays or for other purposes. When the memories included visits, they were mostly to another place that was frequently visited, like nana's or uncle's

house in some other town and only rarely were they about vacations in Europe or Australia. Additionally, the memories recalled were generally routine or repetitive events rather than one-off events, implying that it is not the novel, one-off kind of experiences in exotic locations (in comparison to everyday locations) that people are mostly nostalgic about, rather it is the everyday stuff from the past that is prominent in the repository of nostalgia.

The characters in nostalgic memories were mainly loved ones, mostly friends or partners, followed by family and relatives. This resonates with observations of past research that has found that loved ones like family feature prominently in nostalgic experiences (Holak & Havlena, 1992; Wildschut et al., 2006). The direct music stimulus led to a greater recall of events involving friends/partners, this was likely a result of the type of stimulus chosen for the music condition, as popular music can be an important feature of social bonding in teenagers, especially, whereas some other form of music could have been more salient in another part of one's life. For example, one might listen to folk music with family, or listen to blues by oneself or with a partner rather than with friends in social setting, and as a result more events involving the family could have been elicited if a folk song had been chosen instead. Cultural differences were observed in the characters contained in the recalled events, which might be a reflection of their collectivist–individualistic differences. The greater recall of events with friends or partners in the Indian sample and the greater recall of events with family or relatives in the NZ sample could be a reflection of the *missing* aspect of nostalgia. Participants in the Indian sample were more likely to have been still living with family or spend time with them frequently but not have the opportunity to still meet their friends, which is a reflection of the collectivist nature of the Indian society. Consequently, the Indian sample could have showed a higher recall for memories of times spent with old friends. The opposite could have been true for the NZ sample.

The activities in the nostalgic events mainly involved hobbies and leisure activities (e.g., hanging out in the lounge, watching TV, playing, gardening), but quite often also involved

daily-routine activities (e.g., having breakfast, going to school, being at class) and sometimes involved social gatherings (e.g., birthday or Christmas party). The prominence of leisure activities in nostalgic memories was also observed by Havlena and Holak (1991b). However, it is interesting to note that while people and loved ones are important in nostalgia, it is the time spent with them during ordinary, everyday events more than celebrations and parties that count.

6.1.1.2 Parameters of the Cognitive Process

The literature on nostalgia, to my knowledge, has not observed the state nostalgic process, beyond an analysis of the overall object of nostalgia in the two studies mentioned in the previous section. The method used in Study 2 thus produced results of a kind that do not seem to have appeared before.

Response Time. The response time of the state nostalgic process was measured to see how flammable nostalgia is. Nostalgia was not found to be incited instantly as it took about 13–15 seconds, on average, to elicit the nostalgic process. This was similar to response times for recall of general autobiographical memories, where studies have shown that it takes anywhere between 3–12 seconds to recall a memory through an ‘object’ cue word and between 4–15 seconds to recall a memory through an ‘affect’ cue word (Conway, 1987; Robinson, 1976). It was expected that a direct environmental stimulus would elicit nostalgia much quicker than an indirect stimulus from within the individual. However, the music presented did not immediately lead to nostalgia but on average it was little quicker than that induced by instructions. It was expected that an indirect stimulus would take even longer than fifteen seconds then to incite nostalgia. However, as the memory at the core of nostalgia triggered indirectly was rehearsed more often, this might have made these nostalgic memories more accessible and, thus, required about the same duration to initiate a nostalgic experience.

Trait factors, including nostalgia-proneness, did not correlate with response time. The lack of relationship between response time and trait nostalgia indicates that the more nostalgically-prone people do not have a faster access to a memory that elicits nostalgia, and that they do not have certain salient nostalgic memories ready in their mind at any time of the day for use as a coping tool. Cultural differences in response times were observed, where Indians took almost double that of New Zealanders to feel nostalgic. However, the former also had more intense and longer nostalgic experiences. It is possible that this longer response time was a result of the difference in the testing environment, as the NZ sample was tested in an isolated research laboratory with no noises to serve as distractions other than the general whirrings of electronics in the room, but the Indian sample was tested in different offices and in people's homes, where, even though a private room was used, sounds from general human activity outside the testing room could have acted as a distraction and the participants could have taken longer to delve into a nostalgic memory as a result.

Duration. The nostalgic experiences lasted slightly longer, for an average of about three minutes, when triggered by instruction, with a variation in experience of about three minutes, i.e., some experiences lasted for seconds while others lasted for about six minutes. Nostalgic experiences triggered by music lasted for about two and a half minutes with a variation of one and a half minutes, i.e., some experiences lasted for thirty seconds while others lasted for about four minutes. Thus, the experiences triggered by the indirect stimulus were at times fleeting and at times prolonged, while those triggered by the direct stimulus lasted at least for half a minute and sometimes about four minutes, which was about the average duration of a song. That is, the experience lasted for as long as the music was present.

To place the findings on the duration of nostalgic experiences in the context of research on emotional experience, as duration of emotional episodes range from a few seconds to several hours, nostalgic experiences—albeit these are affective states that are not pure emotional episodes—were well within this range (Fitness & Fletcher, 1993; Scherer et al.,

1986; Sonnemans, 1991; Verduyn et al., 2009a). Furthermore, the durations of these experiences were not found to vary with trait factors, except for that of culture. The longer duration in the direct stimulus condition as compared to the indirect stimulus condition might have been a result of moment factors (Verduyn et al., 2011), as in the former condition, the stimulus was present throughout the experience and thus might have led to a longer experience. The greater variation in duration of experience in the indirect stimulus condition might have been a result of the importance of stimulus and the intensity of emotion, which might have acted as episodic factors that contributed to variation in durational differences between the two experimental conditions. This is because the events elicited by the indirect stimulus were likely to be more important, as they were more rehearsed, and were also rated as more intense, even though the experiences elicited by the direct stimulus were more intense, as per the process function parameters.

Intensity and Variation. The process function parameters assessed gave an empirical estimate of the intensity and variation of the state nostalgic experiences. Nostalgia elicited by a direct stimulus, as compared to an indirect stimulus, was greater in both average and maximum levels of intensity of the nostalgic process function. That is, the presence of a physical stimulus contributed to more intense experiences, than those elicited through instructions to feel nostalgic. Nevertheless, the rated-intensity (on Likert scale) produced contradictory results to measured intensity (from process function). Experiences in the indirect stimulus condition were rated as more intense than those in the direct stimulus condition.

The process functions did not differ in variation between the two experimental conditions but there was an unexpected interactive effect. For the indirect-stimulus-induced nostalgia, a quicker memory recall was associated with a more intense and less varied experience, however, for direct-stimulus-induced nostalgia, a quicker memory recall was also associated with a more intense experience but a less varied one. This might be because when

there is a presence of physical stimulus that incites nostalgia, a quicker induction of nostalgia might mean it is more salient and thus lead to a stronger feeling (i.e., more intense nostalgic experience) and more variation caused by the moment factors of the physical stimulus, i.e., some parts of the physical stimulus might have led to stronger emotional intensity. However, when nostalgia is elicited internally, in the absence of physical stimulus, a quick induction of nostalgia might also have been due to a more salient memory recall, which led to a more intense experience, but the lack of physical stimulus throughout the experience lowered the variation of the curve.

With respect to individual-difference factors, only the more nostalgic-prone consistently had more intense experiences as per both measured and rated-intensity. Those more satisfied in life, however, showed more intense and less varied nostalgic process functions but did not report the experiences to be more intense. Conversely, older participants, females and the Indian sample reported the experience to be more intense but did not have more intense experiences according to the process function measure.

In the course of the experimental procedure, between the observation of the process function intensity and the reported intensity, subjects described the event characteristics to the experimenter, i.e., language components became involved. It could be that the process of describing the event and the experience resulted in a different appraisal of the intensity of experience as it forced the participants to delve into the experience at a greater depth in order to answer the questions. Thus, it might be that the intervening process of reflection resulted in the rated-intensity owing more to a reconstruction of the event than what occurred in the initial nostalgic recall. The change in direction of relationship between the intensity measures of the two experimental conditions is quite interesting and possibly reflects the subjective importance ascribed to the nostalgic experiences elicited by indirect stimulus, which is also reflected by the fact that these memories are more rehearsed, on average.

6.1.1.3 Phenomenology

The phenomenological experience of nostalgia was highest in terms of recall of the *setting* of the event, followed by belief in recall, both, in terms of certainty that the memory is remembered and not just known and certainty that the event really occurred the way it was recalled. The higher recall of setting possibly provides a greater context for the recalled memory, which leads to the higher belief in the reality of the event. This might then be the key difference contributing to the phenomenological difference in nostalgic memories and general autobiographical recollection—the greater recall of the event setting. The phenomenological description of nostalgia usually includes a feeling of *reliving* the memory and *emotions* along with a sense of *travelling back in time*. While all of these components were highly rated, they achieved scores lower than that of the scores for recall of *setting* and *spatial layout*, and also scores lower than the belief in recall components.

The feeling of travelling back in time is an important feature of nostalgia. Psychologically, we infer time from the events that occupy that time, as “the present is linked to both the past and the future by the concept of duration, which we regularly use to define the relationship between now and then” (Burt, 1990, p. 1). The concepts of duration and change of events, thus, are used to infer past events and the time structure in past events. While time is inferred from events, it is the activities that take place in the events, i.e., information in the spatial field, which have to be the guide for making inferences about changes in events, and consequently provide information about the temporal field. In nostalgic memories, where the feeling of travelling back in time is strong, it is not the flow of events that is given importance, i.e., *passage of time* is not what is experienced, rather a *feeling of being back there or back in time* is what constitutes the experience. This feeling of being back there might be an inference from the detailed spatial information of the event rather than a flow of events that informs about the passage of time. Hence, the high setting and spatial layout recall and the strong belief in the reality of the event.

Thus, the enhanced phenomenology of nostalgia might be a result of a greater recall of event setting and details of layout, which might simply be a consequence of greater attentional focus on the encoded event, and results in greater detail of event recollection and, thus, an enhanced phenomenological experience.

In this context, nostalgia might be to the past what mindfulness is to the present and what fantasy is to an alternate reality, an experience resulting from focussing on the sensory details of the past, present or an alternate timeline, respectively. Thus, nostalgia might be an immersive phenomenon that captures one's attention, and in this sense it could be akin to meditation, which involves a regulation of attentional systems through focussed attention (attention is focussed on an intended object) or an open monitoring (i.e., mindfulness, where content of experiences are monitored moment to moment) (Lutz et al., 2008; Manna et al., 2010). In this context, nostalgia might have similarities with fantasy or daydreaming which involves a shift of attention to a hypothetical scenario, due to a lack of executive control over attentional systems (Schupak & Rosenthal, 2009; Smallwood & Schooler, 2006).

Hart (1973) in a philosophical analysis of nostalgia using Husserlian phenomenology also makes a comparison of nostalgia and fantasy. According to Husserl (1964), our experiences are remembered in a context of earlier, later, and simultaneous and Hart (1973) suggests that the difference between nostalgia and fantasy lies in the inherent lack of context in fantasy where the relations between past, present and future do not exist. He also discusses that nostalgia also differs from fantasy in terms of its "noematic kernel", i.e., the object of nostalgia, which is rooted in the past, unlike fantasy. Additionally, he suggests that, in fantasy, there is a clear break from the present that one occupies when the fantasy is active. That is, in the mental space when one is in the fantasy world, the self in the present world stops existing mentally (although obviously not physically). Whereas in nostalgia, while there is a departure from the present, there is never a complete break from the present that the self

occupies, even in the mental world, i.e., when one is nostalgic, there is a departure from the present but the self of the present is still acknowledged in the mental space.

With respect to the other phenomenological components measured, the nostalgic recollection was slightly lacking in coherence, was poor in narrative flow, and did not involve much details of conversation, as compared to the general autobiographical memories. The phenomenology of the nostalgic experience was partially dependent on the trigger that elicited nostalgia, on nostalgia-proneness and on culture. Nostalgia elicited through instructions, and nostalgia experienced by Indians and the more nostalgic-prone was found to be more vivid in most phenomenological aspects (but not all), than that elicited by music, and that experienced by New Zealanders and the less nostalgic-prone.

Thus, the most important phenomenological features of the nostalgic memories were the reliving and visual components than the verbal and linguistic ones. This is in line with general autobiographical memory recall. However, the two types of recall were found to differ on the linguistic aspects, as nostalgic recall had fewer linguistic components than general autobiographical recall, implying that the phenomenology of nostalgic recall involves more re-experiencing than narrative flow, compared to general memories. The lack of difference between the two memory recall types on the components of reliving, emotions and travelling back in time was surprising as these are some of the core features of nostalgia. This warrants more study, perhaps a within-subject study in which participants performed both types of recall.

6.1.2 The Affective Nature of Nostalgia

The affective tone of nostalgia has been widely debated upon since the transformation of nostalgia into a normal phenomenon. The affective nature of nostalgic events and the nostalgic experience, both state and trait level experience, were thus, explored. In addition, the emotions contained in nostalgia were also examined.

6.1.2.1 Affective Tone of Event

The nostalgic *events* were mostly *positive* in tone, but not always. At times they were also a *negative*-toned event, at times they contained *mixed-affect* and at other times they were *neutral* in tone. The direct music stimulus elicited more positive-toned or neutral events, and in comparison to the direct stimulus, and the indirect stimulus elicited relatively more negative-toned and mixed-affect events. Cultural differences in event affective tone was observed, where New Zealanders recalled slightly more positive events than Indians and vice-versa.

The presence of negative affect in the event recalled suggests a case for the redemptive, meaning-making function of nostalgia (Routledge et al., 2008; Wildschut et al., 2006). Additionally, cultural differences and specifically differences in the linguistic connotations of the word nostalgia are entailed and might have been a factor contributing to a greater recall of negative affect in the Indian sample.

6.1.2.2 Affective Tone of Experience

The state nostalgic *experiences* were mostly positive in tone, followed by mixed-affect, and negative tones. Similar to the affective tone of the event, the experiences elicited by the direct stimulus were more positive than those elicited by an indirect stimulus. However, as discussed earlier in the context of event characters, the type of music chosen was a factor that could have skewed the results in favour of the direct stimulus condition, and some other form of music could have led to more negative or mixed affect. Nevertheless, it is worthwhile to note that the affective tone of the nostalgic experience depends on the trigger that elicits nostalgia. Interestingly, the cultural differences observed in the affective tone of the nostalgic *event*, disappeared in the affective tone of state nostalgic *experience* but gender differences were observed, such that women experienced more mixed affect and less positive affect.

Trait affective nostalgia reflected the patterns observed in state nostalgia. General nostalgic experiences were mostly *positive*-toned or of *mixed*, and at times were *negative* in tone. Thus, it seems that the affective valence of trait nostalgia can be of three different types with individual-difference factors and different motivation types showing an association with the valence of trait nostalgia.

Interestingly, an individual's perception of the affective tone of trait nostalgia and whether general nostalgic experiences contained positive/negative affect, corresponded to a recall of positive/negative-affect events and positive/negative affect in the state nostalgic experience, but a different pattern was observed for mixed-affect trait nostalgia. Mixed-affect trait nostalgic experiences showed an association with recall of *negative-toned events* and *mixed-tone state nostalgic experiences*. This association was also observed for gratitude contained within nostalgia (as discussed below) suggesting that the mixed nature of nostalgic experiences could be a result of making peace with a past that has been hurtful by gaining a lesson from the experience, hence, the feeling of gratitude. This is reflective of Wildschut et al.'s (2006) finding that nostalgia contains redemptive sequences.

Different types of trait nostalgic affect also showed associations with the type of events and the activities contained within the event recalled in state nostalgic experiences, suggesting that the propensity to perceive nostalgic affect to be of a certain nature influences the type of event recalled when one is nostalgic or vice-versa. Specifically, the more nostalgically prone individuals thought nostalgia to be of mixed-affect type and this type of affect was associated with recall of more thematic events, suggesting that for the more nostalgia-prone individuals, nostalgia might be more about the feelings rather than the specific events themselves, as discussed earlier. This is also reflected in the relatively low degree of rehearsal in the specific events recalled during the state nostalgic experience, although the experiences were more vivid in phenomenology and were more intense. As a consequence of the above, there was no average nostalgic event observed.

Emotions Contained in the Nostalgic Experience. The emotions contained within nostalgia corresponded to the affective valence of the experience, with mixed affect containing emotions of both valences. Positive emotions (affection, gratitude and achievement) were associated with positive and mixed affect and a negative emotion (loss) was associated with negative and mixed affect. The type of emotions experienced showed associations with the motivational nature expressed in nostalgia, the individual-difference factors, and the nature of event and experience in state nostalgia, such that the emotions experienced played key roles in determining the different components of nostalgia.

For example, those with greater life satisfaction and the more nostalgically prone experienced to a greater degree the positive emotion of affection, which in turn was related to a greater recall of positive-toned state nostalgic experiences characterised by a wish to return to the past. Those more satisfied in life and the more nostalgically prone also experienced a greater degree of the positive emotion of gratitude, but this was associated with a greater recall of more negatively toned events but still gave rise to positively toned experiences during state nostalgia. Conversely, those less satisfied in life but also the more nostalgically prone, experienced more negative emotions of loss, which were associated with the motivational natures of wishing to go back to the past to re-experience the event—all over again or momentarily—and more mixed-affect state nostalgic experiences. Nostalgic experiences were more meaningful and involved more gratitude for the more nostalgic-prone and for females, and feeling these emotions was also associated with motivations of wanting to momentarily re-experience the event and recreate the event in future. Feeling a sense of achievement when nostalgic, on the other hand, was associated with a greater recall of events that occurred in a place that was only visited once, which might have been visited for a competitive event or on vacation.

Thus, along with the affective valence, the emotion one generally experiences in nostalgia was pertinent in determining the nature of the event, and the experience and

motivation expressed during state nostalgia. It also shows that not everyone experiences the same emotions in nostalgia and the kind of emotion experienced has consequences for the nature of nostalgic experiences.

6.1.3 The Motivational Nature of Nostalgia

State Motivational Nature. The motivational nature of state nostalgic experiences were characterised by a yearning to return to the event recalled, for the majority. However, for a fair proportion of recalled experiences, there was no yearning component and the motivation shown was of gaining pleasure from reliving the event without wanting to return to the past. This lack of yearning was more common in the direct music condition than in the indirect stimulus condition. In the indirect condition when there was a lack of yearning, at times the motivation shown was to simply enjoy the event in mind, but at times, even though there was no yearning to return to the past there was a component of *missing* the experience that could not be described as enjoying reliving the event in mind. More light is shed upon this in the discussion on trait nostalgic motivation. The more nostalgic-prone showed a greater motivation to go back the past event during state nostalgic experiences.

Trait Motivational Nature. Nostalgia was characterised by a component of yearning and missing the past, but its implications are more nuanced than simply wanting to return to the past. The motivational nature expressed when one misses the past during nostalgic experiences is likely to be a wish to go back to the past and *momentarily experience it again* rather than a wish to go back to the past and live it all over again, although the latter is also prominently featured. As returning to the past is not an achievable feat, most often this wish is translated into the future, where one wishes to re-experience the past events again in the future, specifically with the people who were present in the original event. At times, though, nostalgia is completely lacking in a motivational nature involving any temporal relocation and instead the motivation is characterised by a wish to relive and enjoy the event in the present. Trait and state motivational natures were also found to correspond to each other,

such that trait motivations that imply a temporal relocation were reflected in state motivations of wishing to go back to the recalled event, and vice-versa for the motivational nature that did not incorporate such intentions.

There were also individual differences observed in the expression of these trait motivational natures. For example, older individuals, presumably due to less opportunity to do so, showed a lower motivation to experience future similar times or to momentarily relive the past, but a greater motivation to relive the past in mind. On the other hand, the more nostalgically prone individuals and those less satisfied with life showed a greater wish to relive the past all over again and a lower wish to relive the past in mind.

Different trait motivational types were also associated with different types of state nostalgic event and experience. For example, wishing to momentarily relive the past and wanting to experience similar future times was associated with a greater recall of leisure or hobby event activities and positively toned events; while, wishing to relive the past all over again was associated with a greater recall of events that occurred in a place that was visited only once. Wishing to relive the past all over again was associated with more intense state nostalgic experiences; and wishing to relive the event in mind without wishing to go back to it was associated with a less intense state nostalgic experience.

Thus, the different motivation types of nostalgia reflected adaptive and maladaptive trends. Motivation to return to the past, momentarily or to relive it all over again, were associated with greater nostalgia-proneness, mixed-affect trait nostalgia and negative emotions of loss. However, wishing to go back to the past momentarily was also associated with some positive features that were absent from the motivation of wishing to live the past all over again, but these features were also present in the motivation of wanting to recreate similar future events. These positive associations included the positive-affect trait nostalgia and the positive emotion of gratitude. A lack of motivation to experience similar events in the future was associated with negative-affect trait nostalgia. Motivation to not relocate

temporally, on the other hand, was associated with positive-affect trait nostalgia and a less intense state nostalgic experience, and was expressed by those who were more satisfied with life, the less nostalgically prone and older individuals.

In conclusion, four different types of motivational natures were observed and identified. The predominant motivation within nostalgia was found to be a wish to go back to the past to momentarily experience it again. This motivation was present in conjunction with either a wish to recreate a similar future event or a wish to go back to the past and live it all over again. When the predominant motivation is present with the former conjunctive motivation, the different parameters of nostalgia and the trait factors indicate a more positive and possibly more adaptive experience; and when the predominant motivation is present with the latter conjunctive motivation, the different parameters and the trait factors indicate a more negative and possibly maladaptive experience. The fourth motivational type identified is much rarer and does not involve a motivation for temporal relocation, i.e., it involves being in the present and gaining pleasure from the mental simulation of the recalled event without wishing to either go back to it or re-experience it. This type of motivation was associated with less intense nostalgic experiences but the experiences were positive and also possibly adaptive.

6.1.4 The Influence of Situational and Individual Factors

6.1.4.1 Situational Factors

The situational factor measured in this study was the nostalgic trigger that elicited the state nostalgic experience. The nostalgic trigger that elicited the experience influenced numerous cognitive aspects (the type of event recalled; characters and activity contained in the event; response time, duration, intensity and variation of experience; and phenomenology), of the state nostalgic experience, along with its affective (both in terms of event and experience) and the motivational natures; as discussed above.

Given these differences in the nostalgic experiences triggered by just two different kinds of stimuli, nostalgia that is triggered by a multitude of other different stimuli might show even more differences. Therefore, it might be appropriate for discussions and studies of nostalgia to take into account the type of trigger that elicits nostalgia. Studying the phenomenon as a whole might lead to a misrepresentation and over generalisation of nostalgia, as when removed from the context of what elicits the experience only an incomplete picture of a constantly changing picture of nostalgia is obtained.

6.1.4.2 Individual-Difference Factors

The influence of the individual-difference factors, namely nostalgia-proneness, age, gender, culture, life satisfaction and place of living, on state and trait nostalgia has already been noted, in the context of the aspects of nostalgia that they have an influence on. This section briefly lists those aspects that each trait variable was found to influence.

Nostalgia-Proneness. Nostalgia-proneness or trait nostalgia influenced the nostalgic experience beyond an enhanced frequency and importance given to nostalgia. The nostalgic experience for the more nostalgically prone individuals is high in intensity, vivid in phenomenology, is of a mixed-affect nature, and enriched by the emotional contents of affection, gratitude, achievement, loss and meaning. The motivational nature expressed by the more nostalgic-prone individuals is one of wishing to return to the past, either momentarily or to live it all over again and is less likely to be one of reliving the event in mind.

Age. Nostalgia is almost intuitively thought to be influenced by age, although the details of the relationship are hard to gauge beyond a possible greater frequency and importance of nostalgia for older individuals (Davis, 1979; Holak & Havlena, 1992; Köneke, 2011). Age was found to influence the cognitive aspects of nostalgia bump, age of memory, the type of events recalled (more thematic events recalled), the characters in the recalled event (more events with ‘only self’ than those recalled by the young) and the activity in the

event (more daily-routine activities). Older individuals also had more intense experiences, showed more positive-affect trait nostalgia, experienced a greater degree of the emotion of achievement, and showed a greater motivation to relive the event in mind and a lesser motivation to go back to the past to live it momentarily or to recreate similar events in the future.

Thus, older individuals experienced more intense nostalgic experiences, but contrary to what has been suggested in the literature (Davis, 1979; Köneke, 2011), they were not more nostalgia-prone, i.e., they are not more frequently nostalgic or find nostalgia to be more significant, than their younger counterparts. In fact, when the different components of trait nostalgia (i.e., the different items on the Southampton Nostalgia Scale) are looked at individually, the last item on frequency of nostalgic experiences revealed a significantly inverse relationship with age (no other items correlated with age). This was consistent with the findings of Batcho (1995) who also found that the young were more nostalgic.

The content of nostalgic experiences (in terms of activity and characters) varied with age, consistent with what has been found in the literature; however, in these studies (Batcho, 1995; Hirsch, 1992) the parameters of measure were different. Previous studies have found that the object of nostalgia for older individuals were found to more likely be music rather than pets and holidays (Batcho, 1995) and their preferences for smells that evoke nostalgia were found to be more natural (e.g., grass or trees), in an inter-generational comparison (Hirsch, 1992).

Interestingly, age was the only trait factor that influenced the cognitive aspects of nostalgia (nostalgia bump and age of memory) and the relationships were consistent with findings of general autobiographical memory research, suggesting that the cognitive aspects of nostalgia are subject to the same system and procedures of governance as general autobiographical memories.

Overall, older individuals experienced a more adaptive and positive form of nostalgia, as they showed more positive-affect trait nostalgia and their motivation during the experience was not to return to the past, rather it was to simply relive the event in mind; however, despite this, their experiences were still more intense than the young.

Gender. Gender differences in nostalgia were studied because previous studies have found contradictory evidence. Some influence of gender on state and trait nostalgia was observed in this study. Women had more intense state nostalgic experiences and, recalled more events about family and relatives, showed more mixed-affect state as well as trait nostalgia, and generally experienced more affection, gratitude and meaning when nostalgic. They were also more nostalgically prone than men; they put more value on nostalgia and were more frequently nostalgic. Men had a more positive state experience as compared to females and their recalled events were more likely to involve friends and partners. These findings were consistent with those of Holbrook (1993) and Batcho et al. (2008), who also found females to be more nostalgic-prone than men. Other studies have also found the content of nostalgic experiences to be different for men and women (Baker & Kennedy 1994; Havlena & Holak, 1991; Sherman & Newman 1977), which was also observed here.

Life Satisfaction. Nostalgia is often touted to be a result of dissatisfaction with the present. In this research, life satisfaction influenced both state and trait aspects of nostalgia but not nostalgia-proneness as such, i.e., those less satisfied with life were not generally more nostalgic. The state nostalgic experiences of those who were more satisfied in life were more intense and less varied, i.e., the experience was more constant and lacking in bursts of emotion. Those more satisfied in life also experienced more positive-affect trait nostalgia, lesser negative-affect and mixed-affect trait nostalgia, showed a heightened emotional experience of affection, gratitude, achievement, and a lower experience of loss. Their experiences were characterised by the motivational intention to simply relive the event in mind and was less likely to involve a wish to return to the past to live it all over again.

The academic literature provides insufficient evidence on the relationship between life satisfaction and nostalgia. Köneke (2011) found some evidence for an inverse relationship between life satisfaction and trait nostalgia but the relationship disappeared when she controlled for other demographic variables. The lack of relationship between these two variables in this study also suggest that how satisfied one is with life does not influence how frequently nostalgic one is or how valuable one finds nostalgia to be. In another study, Sedikides et al. (2008) found that those who were more satisfied with life reaped more of the benefits of nostalgia, which were not available to those less satisfied with life. In this study, those who were more satisfied with life showed a greater experience of positive affect and positive emotions in nostalgia, and contentment in simply reliving the event in mind without wishing to return to it. These aspects of the nostalgic experience might help explain why the continuity function of nostalgia works only for those more satisfied with life but not for those less satisfied with life.

Place of Living. Whether living/not living in one's hometown and home-country had an influence on the nostalgic experience was assessed to see if the old connotation of nostalgia still held. Place of living had a negligible influence on the nostalgic process. Those not living in their home-country recalled more events about past social gatherings—which often included events like Christmas or family gatherings—and showed more motivation to go back to the past to momentarily live it again. This indicates that, while those not living in their home-country do recall more events about past times with friends and family in their home-country, unlike the old connotation of nostalgia or homesickness, they are not overcome by negative affect or a yearning to return home, any more than those who are living in their home-country. This might be because for these individuals the possibility of returning home is not being prevented by a Goddess or need for financial security. Instead returning home is within their reach if they wish to do so, as a result there is less goal frustration and the predominant nostalgic motivation is to momentarily relive the past,

without a wish to re-experience these events in future times, which was greater in those living in their home-country.

Culture. Culture is hypothesised to have an influence on the phenomenon of nostalgia, given its preponderance in different niches of the society. Cultural differences between New Zealanders and Indians were observed in the cognitive aspects and motivational nature of nostalgia. Amongst Indians, a much higher response time and duration of experience was observed. They had a more intense and more phenomenological experience, recalled more negative events, and recalled more events involving friends and pertaining to daily-routine activities. They also showed a greater motivation to relive the past all over again. New Zealanders recalled more specific events compared to Indians, more positive events, and those involving family and relatives, and pertaining to leisure activities. The cultural differences observed in nostalgia further stress its variable nature and indicate that linguistic differences and attitudes toward nostalgia might play as important a role in determining its structure as other trait factors. This is not surprising given the history of the concept and the already established connections in changing connotations. However, it might also just be that the life experiences of Indians and New Zealanders differ on average

6.2 Implications, Limitations and Future Directions

This research study examined nostalgia at work, to observe what it means to be nostalgic in terms of its cognitive, affective and motivational components and their interrelations with each other, i.e., whether certain cognitive aspects are associated with certain affective and motivational experiences. Associations and patterns were observed among the different components, which were further influenced by situational and individual-difference factors. The implications of the findings of this research work are outlined below.

- i. Nostalgia is not a constant phenomenon. It is widely accepted in the literature that nostalgia is a complex mix of emotion and cognition. It is also discussed that there might be a normal and a pathological form of nostalgia. However, even normal nostalgia seems to be too

complex and contains many different parts that vary in its contents and nature, which then influence aspects or the whole picture of the phenomenon. Research on the topic, thus, needs to take account of these variations, when discussing the cause and effect of nostalgia.

ii. The trigger that elicits nostalgia is important in determining the components of the phenomenon. Hence, any cause, effect and factor of nostalgia might be relevant only in the context of the trigger that elicits the experience. Presumably, this would especially apply to differences between voluntarily and involuntarily triggered nostalgia. That is, nostalgia triggered involuntarily due to the presence of a stimulus in the environment is likely to have different implications for the recalled memory and the resultant experiential nature than nostalgia that is triggered by someone sitting down and thinking about the past.

iii. The affective nature of nostalgia has been hugely debated in the literature. Congruent with other recent research, the affective nature of nostalgia was found to be positive for the majority, but it was not always so. In line with research suggesting that nostalgia contains a redemptive sequence, it appears that the bittersweet nature for the most part is a result of a transformation of the affective nature of an event that was originally negative or mixed to a more positive recollective experience, as a consequence of feeling gratitude. However, this was not the only instance when nostalgia was found to be bittersweet. As suggested in the literature, the bittersweetness might also be a consequence of a yearning to return to the past.

iv. Nostalgia was found to contain various emotions within it, which also deserve to be taken into account. While it is possible to study emotions triggered by different kinds of stimuli and draw generalised conclusions for what it means for the emotion itself, nostalgia is a complex affective phenomenon *made up of* various emotions and, as such, observations about the phenomenon depend on the different emotions contained within that specific nostalgic experience and might not be applicable to all other nostalgic experiences, or to all other experiencers.

v. Nostalgia was found to contain a component of yearning or missing the past, but a deeper exploration of this component revealed that missing the past mostly translates to wishing to momentarily experience it and recreate similar events in future, although at times it does translate to a wish to go back and live the past all over. The type of motivation expressed in nostalgia is pertinent to the adaptive/maladaptive question in nostalgia, and thus, has implications for its benefits or handicaps. The motivational nature of nostalgia is an important component of the experience and nostalgic experiences should be discussed in its context.

vi. Nostalgia might just be a consequence of having an autobiographical memory. While nostalgia serves important functions, given its prevalence in everyday life and given that it pertain to a multitude of memories (most of which are everyday experiences of the past), at times (and possibly most often) nostalgia might be an experience that is conjured up as a result of a combination of external or internal stimulation. This experience might turn into one richer than a simple autobiographical recall as a result of one being able to switch-off attention to distractors in the environment and focussing on one particular stimulus (i.e., the memory at the core of nostalgia). This might result in the vivid phenomenology of nostalgia, which is its most compelling feature.

Limitations and Future Directions

This research work took a bottom-up approach to study several unexplored components of nostalgia. In doing so, it also made use of tools that were mostly not standardised. For example, the measure of response time might have been subject to individual-difference factors of anxiety levels, as some participants might have been more anxious than others and, thus, keener to press the trigger and get it started. The experimenter tried to account for this bias by instructing participants to try and relax and to not feel forced to immediately get the experiment started and press the trigger soon after the cue, but to remain calm after the cue has been presented and to press the trigger only when they start to feel nostalgic. The use of

the slider in reporting cognitive and emotional experiences can be quite useful, but future studies could incorporate a practice round for an unrelated experience before the actual data are collected.

This research work explored the motivational nature in terms of agreement for each type of motivation to see if patterns emerge for individual differences and the other components of nostalgia. In future-research, a forced-choice format might reveal more information on these motivational types in terms of their solitary or co-habitational presence with other motivational types, i.e., if an individual is likely to show only one type of motivation when nostalgic in general, or can show different motivational types during different state nostalgic experiences.

The phenomenological observations were only made in terms of self-reports, and the comparison to general autobiographical memories was also limited in its scope. Future studies on nostalgia could look into phenomenological aspects in greater detail through experimental studies along the line of attention research, and conduct a comparison with general autobiographical memory recall, mindfulness/meditative states and mental states of imagination/fantasy.

6.3 Conclusion

The complex phenomenon of nostalgia could be comprehended by providing an account of the operations of its parts concurrent to observations of the phenomenon as a whole. This research work showed that nostalgia is variable, with its cognitive, affective and motivational aspects varying in content, often in synchrony with certain other features of a different sub-component of nostalgia. Nostalgia was found to be generally positive and still characterised by yearning, but since nostalgia is now considered to be non-pathological, it is not a hopeless yearning to return to the past but is instead often translated into a yearning to repeat the past in the future, specifically with the people who were in one's past. The phenomenology of nostalgia was found to be heightened in sensory details, which contributed to the belief in the

reality of that experience and also made it more real. If not for this real-life-like experience of nostalgia, nostalgia would be as ordinary as general memory recall because nostalgia pertains mostly to the everyday aspects of past lives and is rarely about the novel experiences of the past. These attention-grabbing, captivating, phenomenological qualities of nostalgia, which make it an experience worth having, deserve more attention in return.

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